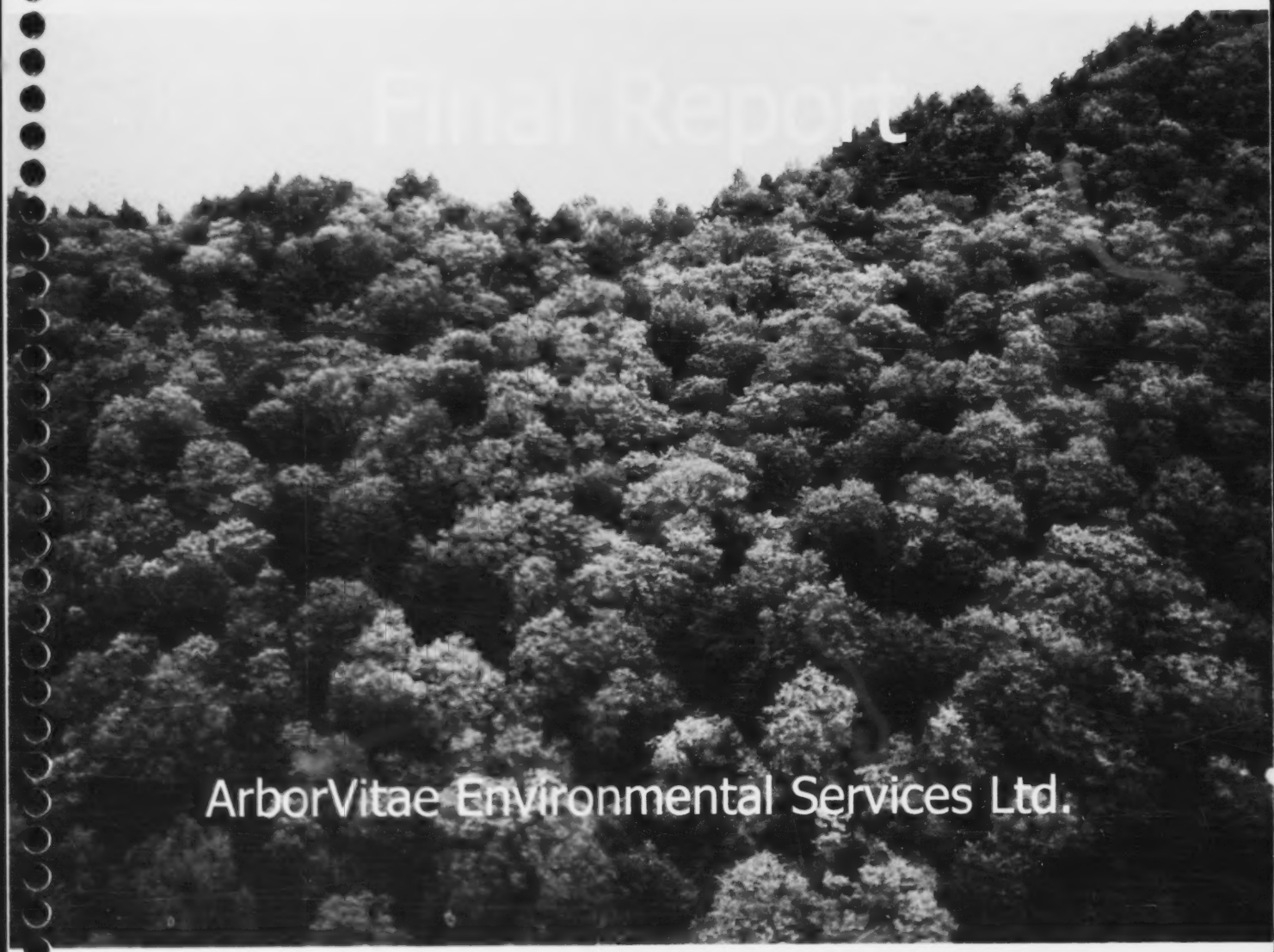
Sessional Paper No. 103
1st Session 39th Parliament
Tabled APR 3 - 2008
Tabling Clerk: mfz

COPY

French-Severn Forest
Independent Forest Audit
April 1, 2001 – March 31, 2006



ArborVitae Environmental Services Ltd.

January 18, 2007

The original copies of this report have been printed on paper produced from well-managed forests and other controlled sources as certified by the Forest Stewardship Council.

© Queen's Printer for Ontario, 2007

Mixed Sources
Product group from well-managed forests and other controlled sources
www.fsc.org Cert no. SW-COC-1985
© 1996 Forest Stewardship Council
FSC

Table of Contents

1 EXECUTIVE SUMMARY 1

2 INTRODUCTION 3

2.1 AUDIT PROCESS 4
2.1.1 Purpose and overview of the process 4
2.1.2 Process 6
2.2 FOREST MANAGEMENT CONTEXT 9
2.2.1 Location of the Management Unit 9
2.2.2 Description of the Forest 10
2.2.3 Relevant Forest Management Issues 15

3 SUMMARY OF AUDIT FINDINGS 17

3.1 COMMITMENT 17
3.2 PUBLIC PARTICIPATION 18
3.2.1 Local Citizens Committee 18
3.2.2 FMP Standard Public Consultation Process 20
3.2.3 Native People's Consultation 21
3.2.4 Annual Work Schedule Public Inspection 22
3.3 FOREST MANAGEMENT PLANNING 22
3.3.1 Planning Team Activities 22
3.3.2 Resource Stewardship Agreements 24
3.3.3 Sources of Direction 24
3.3.4 Plan Introduction 25
3.3.5 Management Unit Description 25
3.3.6 Objectives and Strategies 26
3.3.7 Operational Planning 30
3.3.8 Plan Review and Approval 37
3.3.9 Plan Amendments 38
3.3.10 Contingency Plans 40
3.3.11 Annual Work Schedules 40
3.4 PLAN IMPLEMENTATION 42
3.4.1 Areas of Concern 42
3.4.2 Harvest 42
3.4.3 Renewal 44
3.4.4 Tending and Protection 52
3.4.5 Renewal Support 53
3.4.6 Access 54
3.5 SYSTEM SUPPORT 55
3.5.1 Human Resources 55
3.5.2 Documentation and Quality Control 57
3.6 MONITORING 57
3.6.1 General Monitoring 57
3.6.2 Annual Reports 63
3.6.3 Report of Past Forest Operations/ Year Ten Annual Report 63
3.7 ACHIEVEMENT OF MANAGEMENT OBJECTIVES AND FOREST SUSTAINABILITY 64
3.7.1 Achievement of Management Objectives 64
3.7.2 Review of RPFO Assessment of Sustainability 77
3.7.3 Review of Comparison and Trend Analysis of Planned versus Actual Forest Operations 78
3.7.4 Conclusions Regarding Sustainability 78
3.8 CONTRACTUAL OBLIGATIONS 80
3.8.1 Payment of Crown Timber Charges 80
3.8.2 Forestry Renewal Trust 80
3.8.3 Wood Supply Commitments 81

3.8.4 Monitoring Obligations *81*
3.8.5 Treatment of X, Y, and Z Lands *82*
3.8.6 Previous Independent Forest Audit *82*
3.8.7 Licence Conditions *87*
3.8.8 Licence Extension *87*

4 SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS 88

List of Tables

Table 1. Sampling intensity of the Audit. 7
Table 2. Land Area in the French-Severn Forest by ownership and type (ha) 11
Table 3. Major Working Group Species Production Forest Area (ha) and Percentage of Total Production Forest Area. 13
Table 4. Planned versus Actual Harvest Area (ha/5 yr period) in 1999 FMP. 43
Table 5. Planned versus Actual Harvest Volume (M m3/5 yr period) in 1999 FMP. 43
Table 6. Areas harvested by Forest Units Grouped by Species, and Stand Improvement Area. 48
Table 7. Funds Provided to the Forest Renewal Trust by Species Group ($). 49
Table 8. Frequency of Inspections and Non-Compliant Reports by SFL-holder and MNR. 61
Table 9. Assessment of the Achievement of the Goals and Objectives of the 1999 FMP. 65
Table 10. Assessment of the Achievement of the Goals and Objectives of the 2004 FMP after Year 2 of the FMP 70
Table 11. Review of the implementation status of recommendations made in the 2001 French-Severn Independent Forest Audit. 83
Table 12. Summary of Recommendations, Suggestions and Best Practices. 90

List of Figures

Figure 1. Map showing location of field sites inspected by the Audit Team. 8
Figure 2. Location of French-Severn Forest Management Unit. 10
Figure 3. Proportional break out of French-Severn Forest landbase area by ownership and management status. 12
Figure 4. Production forest area by age class of even-aged forest units on Crown managed land in the French-Severn Forest. (Source: FMP-9, 2004 FMP) 14
Figure 5. Example of rocky white pine site near Georgian Bay. 45
Figure 6. Example of group selection opening in tolerant hardwoods. 45
Figure 7. Successful white pine renewal under shelterwood. 46
Figure 8. A white pine shelterwood site in need of tending. 46
Figure 9. Example of a by-passed poor quality tolerant hardwood stand. 51
Figure 10. A stand improvement project funded by Forestry Futures Trust. 51
Figure 11. ATV tracks through a sensitive site on the Forest. 55

List of Appendices

Appendix A. Forest Manager's Report
Appendix B. Audit Team Members and Qualifications
Appendix C. Independent Forest Audit Guiding Principles
Appendix D. List of Acronyms
Appendix E. Input from Parties

1 EXECUTIVE SUMMARY

ArborVitae Environmental Services Ltd. performed an independent forest audit (IFA) of the management of the French-Severn Forest for the period April 1, 2001 to March 31, 2006. The audit was undertaken using the Independent Forest Audit Process and Protocol (IFAPP), prepared by the Ontario Ministry of Natural Resources (MNR). The IFA examined compliance with the Crown Forest Sustainability Act, the terms of relevant licences, especially Sustainable Forest Licence #542411 held by the Westwind Forest Stewardship Inc. (the Company), and the management plans in place for the Forest.

This IFA covers the completion of operations in the final three years of the Forest Management Plan (FMP) that came into effect on April 1, 1999, and the achievement of that plan's objectives. The subsequent FMP came into effect on April 1, 2004; this IFA covers the development and content of the plan as well as the implementation of the first two years of operations.

This is a favourable audit, and while there are key challenges to managing the French-Severn Forest, the Company, with strong support from the MNR, has done well in the circumstances. The audit makes 25 recommendations (one of which is to extend the licence) and six suggestions and identifies two best practices. An examination of where the recommendations occur in this audit report provides a good depiction of the Audit Team's impressions of management of the Forest. Five recommendations were related to plan implementation - the Audit Team had a favourable impression of the field operations inspected but difficulties funding the renewal program were also discussed under this principle. This was the key issue identified in this audit. Similarly, the fact that thirteen of the recommendations, and three suggestions, related to the planning principle of the IFAPP reveals that the Audit Team believes that there are a number of opportunities for improvement in aspects of planning for the Forest. Four of the recommendations came under the Public Participation Principle, and three of these were designed to improve interactions with First Nations. It is noted that most of the First Nations have other priorities other than forestry, leading to a low level of engagement.

Some of the key aspects of forest management which feature prominently in this audit are reviewed below.

Low Level of Actual Harvest compared to Planned

The actual harvest area was 38% of the planned level during the 1999 FMP period, down from 46% in the previous period. The harvest level was not expected to change during the term of the 2004 FMP. The key reasons for this situation are an abundance of low quality timber in many stands, due to past high grading practices, and poor markets and low prices for low quality timber. This means that harvesting in many stands is economically marginal, and results in a low level of utilization.

The key impacts of this are that the outcomes that are anticipated from following the management plan will not be achieved if this situation persists, and an opportunity has been foregone to enhance other values in the Forest.

In response, the Company has reduced the number of planned white pine shelterwood harvest entries, and moved approximately 10,000 ha of tolerant hardwood area out of the selection-based forest units into the shelterwood forest unit.

Insufficient Revenue for Forest Renewal Trust to fund Desired Silvicultural Program

Management of the white pine sites on the Forest is challenging, and translates into a requirement for expensive measures to renew pine. However, the volume yielded per harvest entry into the pine stands is low, meaning that in the early stages of harvesting, operating in pine is a drain on the Forest Renewal Trust. The low harvest levels discussed above do not help this situation. As a result, the Forest Renewal Trust is unable to adequately fund the desired level of silviculture, placing the successful regeneration of pine at risk on some sites. The situation has reached a critical point at the end of the audit period.

Higher than Anticipated Levels of Backlog

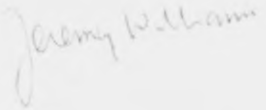
When the French-Severn Forest was created, part of the establishment agreement included payments to Westwind for appropriate silviculture on sites that had been previously harvested under MNR management. It has become evident that the amount of backlog was much greater than anticipated, and the condition of renewal on it was poorer than expected. The Company has been able to secure Forestry Futures funding to treat some of the additional backlog, but the Company estimates that there is 8,000 to 14,000 ha of backlog remaining. This audit recommends that MNR and the Company evaluate the extent of the backlog, and its treatment requirements, and negotiate a payment from MNR that would enable the Company to fully treat the additional backlog.

While there are management challenges on this Forest, the Company has also continued to innovate in a number of areas. These include undertaking a wide range of outreach activities, developing a well-written and informative 2004 Forest Management Plan, and becoming certified under the Forest Stewardship Council. District MNR has been very supportive of these efforts, and as a result, a best practice was awarded.

The Audit Team has concluded that during the term of the audit period, the French-Severn Forest was managed:

- in general conformance with all legal requirements, including MNR policies and regulations;
- in conformance with the terms of the Sustainable Forest Licence;
- generally according the 1999 and 2004 FMP, with the exception of the low harvest rates relative to planned levels; and
- within the general bounds of sustainability.

The Audit Team recommends that the Minister of Natural Resources extend the term of Sustainable Forest Licence #542411, held by Westwind Forest Stewardship Inc for the French-Severn Forest, for an additional five-year period.



Jeremy Williams, Lead Auditor

2 INTRODUCTION

This report presents the findings of the second Independent Forest Audit undertaken on the French-Severn Forest, which is also known as the Westwind Forest. The French-Severn Forest is managed under a Sustainable Forest Licence (SFL) held by Westwind Forest Stewardship Inc (Westwind or the Company). The SFL, # 542411, was originally approved by Order-in-Council on May 6, 1998, and has been amended several times since, most recently on June 14, 2006.

The transfer of forest planning and management responsibilities from the Ontario government to the private sector, and the amalgamation of forest management units, were key policy directions in the Ontario forest sector over the last decade. Prior to Westwind's assumption of management responsibilities, MNR managed the area as two Crown Management Units – Georgian Bay and Bracebridge. These were amalgamated in 1997 to create the French-Severn Forest.

Westwind is unique in the Ontario forest sector in that it is the only non-profit, community-based SFL-holder. The Company is responsible for undertaking forest planning on the French-Severn Forest, administering harvesting operations, and undertaking renewal and maintenance activities (through contractors). Westwind itself does not harvest timber. Companies that wish to harvest forest resources on the managed Crown forest land covered under the SFL are required to obtain an Overlapping Licence from the Ministry of Natural Resources and enter into an Overlapping Licence Agreement (OLA) with Westwind. Westwind currently has 24 operators that have assigned percentages of the allowable harvest, and three others who share a small unassigned portion. Of these, Tembec has the largest share, at 39.27% in 2005/06, and Domtar has a roughly 6% share. The other operators are smaller companies, including Goulard Lumber, Muskoka Timber Mills, and Roy's Lumber and Mining Timber Ltd. Operators pay management fees to Westwind based on their share of the harvest.

Westwind is headquartered in Parry Sound and has a full-time permanent staff of ten, consisting of a general manager, two foresters, five field technicians and two administrative and health and safety staff. GIS services are provided by MITIG, which has a staff person based in the Westwind office. An eight-member Board of Directors oversees the Company; there are three Board members from the forest industry, four from local communities and one from a First Nation.

The MNR oversees and contributes to some aspects of forest management, including licensing and approvals, parts of plan preparation, review and approval, compliance assessment, and management of wildlife and other non-timber values. The MNR was formerly organized so that there were two Districts in the French-Severn Forest area – Parry Sound and Bracebridge. These districts have been amalgamated, with the main office in Parry Sound and Bracebridge becoming an area office.

While the French-Severn Forest is managed as a single entity, there are still remnants of its previous organizational structure. In part this is because the Forest is bisected by Highway 11, which runs north-south and centres a corridor of primarily private land. Thus, the Crown land on the western part of the Forest tends to be located along the west shore of Georgian Bay, while there is another band of Crown land in the eastern

part of the Forest. The Georgian Bay sites are rockier, with thinner soils, and tend to be dominated by pine, although there is a considerable area of hardwood. The forests in this area have poorer quality timber than many other areas in the southern Region. In contrast, the forests on the eastern part of the unit are more productive, tolerant hardwood dominated stands. The tolerant hardwoods in the Georgian Bay and Bracebridge sides are managed as different forest units, and as different administrative areas by MNR. Two Westwind technicians look after the Bracebridge side, and two look after the Georgian Bay side.

The Crown Forest Sustainability Act (CFSA) empowers the Minister of Natural Resources to manage Crown forests in Ontario and also provides the legislative basis for the Independent Forest Audits. This Independent Forest Audit (IFA) covers the period from April 1, 2001 to March 31, 2006. It assesses all of the operational activities during the audit period, including harvesting, renewal, access construction and management, values protection, monitoring, reporting and annual work schedule preparation.

The first Forest Management Plan (FMP) developed by Westwind came into effect on April 1, 1999, was reviewed in the previous IFA conducted in 2001. This IFA covers the completion of operations in the final three years of that plan, and the achievement of that plan's objectives. The Forest's second FMP came into effect on April 1, 2004; this IFA covers the development and content of the plan as well as the implementation of the first two years of operations.

The team which conducted this audit consisted of five individuals, all experienced forest auditors, and all specialists in various aspects of forest management. Appendix B provides details of their qualifications, roles and responsibilities.

Forest management in Ontario (and elsewhere) uses a variety of technical terms. We have tried to explain terms as they are used in this document, but readers unfamiliar with the forest management planning process in Ontario are referred to the document "A Guide to Forest Management Planning"[1] (available from the Ministry of Natural Resources) for further explanations. Appendix D lists the acronyms used in this report.

2.1 AUDIT PROCESS

2.1.1 Purpose and overview of the process

The CFSA directs the Minister of Natural Resources to conduct a review of each tenure-holder every five years to ensure that the licensee has complied with the terms and conditions of its licence. The Independent Forest Audit fulfills this mandate, as well as complying with the direction to the Ministry laid out in Terms and Conditions #86 and 87 and Appendix 25 of the 1994 Class EA decision to "undertake operational audits, through the appointment of suitably qualified independent audit teams, which will include an assessment of compliance with the timber management planning process, approved Timber Management Plans, implementation manuals, and provincial policies,

[1] Ontario Ministry of Natural Resources. 1997. A Guide to Forest Management Planning. Ontario Ministry of Natural Resources Forest Information Series. 16 p.

procedures, and legislation". The Declaration Order[2] confirmed the importance of the IFAs and imposed some additional conditions on MNR; direction regarding the conduct of the audits is also provided in Ontario Regulation 160/04 under the CFSA.

The scope and process of an IFA is set out in the Independent Forest Audit Process and Protocol (IFAPP), which is maintained by the MNR. The IFAPP, which is reviewed and updated annually, contains more than 400 individual audit procedures. Of these, roughly 350 apply to this IFA.

The IFAPP states that the purpose of the audits is to:

- "assess to what extent forest management planning activities comply with the Forest Management Planning Manual and the [Crown Forest Sustainability] Act;
- assess to what extent forest management planning activities comply with the Act and with the forest management plans, with the manuals approved under the Act, and the applicable guides;
- assess the effectiveness of forest management activities in meeting the forest management objectives set out in the forest management plan, as measured in relation to the criteria established for the audit;
- compare the forest management activities carried out with those that were planned;
- assess the effectiveness of any action plans implemented to remedy shortcomings revealed by a previous audit; and
- review and assess a licensee's compliance with the terms and conditions of the forest resources licence."

The results of each audit procedure are not reported separately in this report. Rather, they have provided the basis for the discussion in the following sections (primarily Section 3), where noteworthy aspects of the management of the Forest are brought forward. These discussions are followed in some instances by recommendations or suggestions which are explicitly defined in the IFAPP:

Recommendation - "sets out a high level directional approach to addressing a non-conformance. In most cases, recommendations follow from the observation of material non-conformances. In some instances, however, auditors may develop recommendations to address situations where they perceive a critical lack of effectiveness in forest management activities, even though no non-conformance with law or policy has been observed."

Suggestion - "value-added advice which reinforces adaptive resource management and contributes to continuous improvement."

Of these two types of findings, recommendations are the more serious and must be addressed in follow-up actions. Both recommendations and suggestions can be directed towards the Company and/or the Ministry of Natural Resources. Finally, if the Audit Team feels that an aspect of forest management is exceptional it may be identified as a best practice. The IFAPP provides the following definition:

Best practices – "practices so identified should be 'exceptional', not situations in which

[2] Declaration Order regarding MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario, approved by Order in Council 1389/03 on June 25, 2003.

forest management is simply meeting a good forest management standard. Highly effective novel approaches to various aspects of forest management may represent best practices. Similarly, applications of established management approaches which achieve remarkable success may represent best practices."

During this audit, the Audit Team found situations which should be corrected by the tenure holder, some which are the responsibility of the MNR District, and some which merit a joint Company-District MNR response. Issues which we believe should be addressed by the field units of MNR (i.e. Parry Sound District Office) are addressed in recommendations or suggestions which simply identify "MNR" or "District MNR". Other situations which we believe need corrective action and which are related to the general framework of forest management in Ontario, are more appropriately addressed by the corporate sections of MNR. These situations involve issues that were manifested locally (hence, they surfaced in this audit), but their resolution lies in the Main Office, Forest Management Branch, or another corporate part of MNR. Recommendations or suggestions which we believe should be addressed by central branches or sections of MNR identify "Corporate MNR" as having primary responsibility.

2.1.2 Process

The IFAPP describes each of the components of the audit process and contains the audit protocol, which constitutes the main framework for the audit. There are eight principles within the audit protocol (reproduced in Appendix C). Each principle contains a series of criteria, which, if met, will result in the principle being achieved. For each criterion, a number of procedures are used to assess the auditees' compliance and effectiveness. As noted above, there are more than 350 individual procedures applicable to this audit of the French-Severn Forest.

The audit commenced with the preparation of a detailed audit plan[3], which described the procedures to be used during the audit and assigned responsibilities to members of the Audit Team. A pre-audit meeting was held between representatives of the Audit Team, Westwind, and MNR. The primary purposes of the meeting were to familiarize the auditees with the audit process, review the Audit Plan, discussing any issues raised by the Local Citizens Committee (LCC), general public or other interested party, and to select the sites to be inspected in the field during the audit.

The focus of the audit was an intensive six-day site visit, which included the following:

- review of relevant documents at the offices of the Company and the MNR in Parry Sound, as well as some records in the MNR Bracebridge Area Office;
- interviews with Company staff, commitment holders and overlapping licensees, MNR personnel based in Parry Sound and Bracebridge, MNR regional staff, staff from MNR's forest management branch, and members of the LCC; and
- field inspection of many representative sites where the forest management activities were undertaken during the term covered by the audit, examining:
    - results of harvesting and silvicultural operations in a range of forest types on different site types;
    - results of practices intended to safeguard wildlife, aquatic, and tourism values; and

[3] ArborVitae Environmental Services Ltd. French-Severn Forest Independent Forest Audit Plan, July 22, 2006.

- results of road construction, maintenance, and abandonment practices.

The Audit Team visited a variety of sites throughout the Forest where activities had been undertaken during the audit period (see Figure 1). Most of the sites were selected by the Audit Team at a one-half day meeting following the pre-audit meeting, with some minor adjustments afterwards largely dictated by access.

Table 1 shows the total amount of each key activity and the sample size and sampling intensity for key operations. The IFAPP required the Audit Team to sample between 10 and 20% of the area treated during the audit period for harvesting, site preparation, and other key activities. The audit was within or exceeded this desired sample size for all activities.

Table 1. Sampling intensity of the Audit.

Feature	Total in Audit Period *	Total Sampled	Sample Intensity %
Harvest (ha)	20749	7118	34
Site Preparation (ha)	1869	1727	92
Natural Regeneration (ha)	14736	3708	25
Artificial Regeneration (ha)	2310	683	30
Tending (ha) **	5275	713	14
Road construction (km) ***	0		n/a

* Preliminary harvest and silviculture data for 2005/06 were used to develop the total area of harvest operations for the audit period.
** The figure for tending includes manual and chemical cleaning. Stand improvement work is included under harvesting.
*** No primary or secondary road construction was planned or undertaken during the audit period. Tertiary road construction is not reported.

In Table 1, the total in the audit period refers to the areas that were harvested, site prepared, and renewed during the audit period, and an estimate of the total number of Areas of Concern in blocks depleted in the audit period. The next column to the right shows the total area of the treatments viewed during this audit. The sampling intensity is calculated by dividing the area of treatments viewed by the total area (or other relevant measurement statistic) during the five-year period.

The auditors were required to verify in the field at least 20% of the areas reviewed in specified procedures undertaken by KPMG. This review was undertaken for the 2005-06 fiscal year, but neither achievement data for 2005/06 nor the draft report were available at the time of the site visit. Based on estimate from the Company and previous years figures, the auditors estimated the extent of the 2005/06 operations and selected at least 20% of these areas to view in the field.

Figure 1. Map showing location of field sites inspected by the Audit Team.

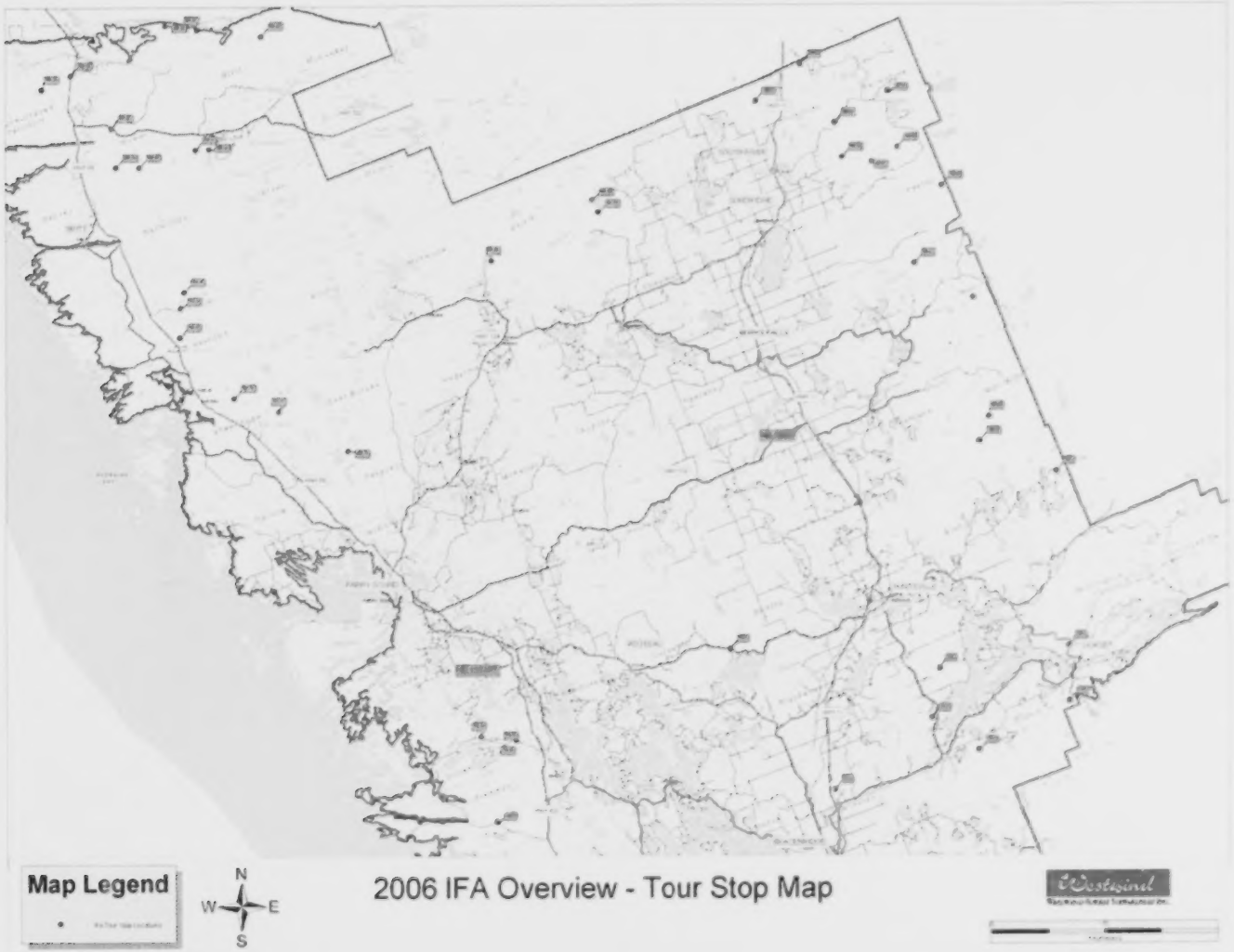


Table 1 is intended to portray an approximate level of effort only. There are several factors which preclude too-precise an interpretation of the figures presented in the table. Although roughly 45 stops were made during the field inspection portion of the audit, more than one aspect of forest management was inspected at most stops. For example, at stops where harvesting had taken place, harvest practices, compliance issues, road construction, Area of Concern (AOC) protection, site preparation, and regeneration activities may all have been inspected. Finally, although stand and treatment areas are shown in Table 1 it should be noted that we did not inspect every hectare of the blocks we visited – such a level of effort would be infeasible.

Examples of operations were examined in each major forest unit present on the Forest, representing a range of harvesting systems, harvest operators, season of operation, and silvicultural treatment packages. These included sites that had been harvested in the audit period using clearcut, selection and shelterwood harvest systems. A number of sites where renewal activities had been conducted during the audit period were visited to evaluate the appropriateness and quality of these treatments and to perform an initial evaluation of their effectiveness. These included sites that were scarified, planted, and those for which natural regeneration was planned.

2.2 Forest Management Context

2.2.1 Location of the Management Unit

The French-Severn Forest is located in south-central Ontario, just north of the Area of the Undertaking. The Forest extends from the eastern shore of Georgian Bay westward to the boundary of Algonquin Park and the Bancroft-Minden Forest on the east. It extends as far south as Lake Couchiching, and as far north as the French River; the Nipissing and Sudbury Forests are on the northern boundary of the French-Severn. The major communities located in the forest are Parry Sound, Huntsville and Bracebridge. Figure 2 shows the French-Severn Forest.

There are seven interested First Nations: Dokis, Henvey Inlet, Magnetawan, Moose Deer Point, Shawanaga, Wahta Mohawks, and Wasuaksing First Nations. Most of these First Nations have reserves located along the Georgian Bay shore, within the French-Severn Forest. The exceptions are the Wahta Mohawks (near Bala), and Dokis, located to the north of the Forest.

Figure 2. Location of French-Severn Forest Management Unit.

One of the key characteristics of the Forest is that it is bisected on a north-south line by Highway 11, and along the Georgian Bay coast, Highway 400 runs north to Parry Sound and continues as Highway 69 to the French River and northward. There is a high concentration of private land located on either side of Highway 11, with the Crown land areas being located along the Georgian Bay shore and east of Highway 11.

2.2.2 Description of the Forest

This section of the report, and the following section on forest management issues, are primarily based on information contained in the 2004 FMP.

While the area within the French-Severn Forest boundary exceeds 1.25 million ha, the Company manages only one-third of this. More than forty percent of the Forest is privately owned, while most of the remainder is Crown Park or unmanaged land. Within the Forest, a considerable amount of private land has been harvested, often repeatedly, over the years but neither the MNR nor Westwind manage any of it. The timber harvesting and management activities on private land are not subject to the terms of the CFSA, the SFL, or the FMP, and are outside the scope of this audit.

Table 2 shows the extent of various components of the landbase by ownership class. The area of land in the Park and unmanaged category includes provincial parks and areas that have a legal status that precludes them from being available for timber harvesting, such as conservation reserves. The area of the French-Severn Forest is 1,287,210 ha, which includes more than 150,000 ha of water. Roughly 88,000 ha is non-forested (much of this area is rock), leaving 1,044,882 ha of forest area. Of this, 175,521 ha is not sufficiently productive to grow merchantable trees, leaving a total of 77% of the (non-water) landbase that is considered productive.

Table 2. Land Area in the French-Severn Forest by ownership and type (ha)

Landbase Component	TOTAL	Private	Crown Park & Unmanaged	Crown Managed
Water	154223	16973	16110	120042
Non-forest	88105	77173	1187	8283
Non-productive Forest	175521	46108	51047	70534
Productive Forest	869361	411621	85237	351149
TOTAL	1287210	551875	153581	550008

(Source: FMP-1, 2004 FMP)

Figure 3 shows the proportional distribution of land area by ownership and management class, adjusted by the removal of area covered by water.

Of the total land area in the French-Severn Forest (excluding water), 47% is privately owned, 38% is Crown managed land, 12% is in provincial parks or unmanaged, and 3% is federally owned. In the 1999 Ontario Living Legacy exercise, a total of 42,000 ha was removed from the managed and available Crown landbase of the French-Severn Forest to create eight new parks and park additions and 55 conservation reserves. Key Provincial Parks in the French-Severn Forest include the French River, Grundy Lake, Arrowhead and Killbear. In addition, the Great Lakes Heritage Coast is a featured management area under the Living Legacy and it includes the Georgian Bay coastline and many islands. Table 2 shows the area of all land components (including water) by ownership and type of management.

Table 2 also indicates that the area of the Crown managed productive forest is 351,149 ha, and of this, 33,397 ha is protection forest.[4] Figure 3 shows the break out of the productive forest area by ownership and management status (area covered by water has been excluded). This leaves an area of roughly 318,000 ha, or 28% of the total land

[4] The 2004 Forest Management Planning Manual defines protection forest as productive forest on which forest management activities cannot normally be practiced without incurring deleterious environmental effects because of obvious physical limitations such as steep slopes and shallow soil over bedrock.

area, that is available for timber management under the auspices of the Company and the FMPs prepared for the Forest.

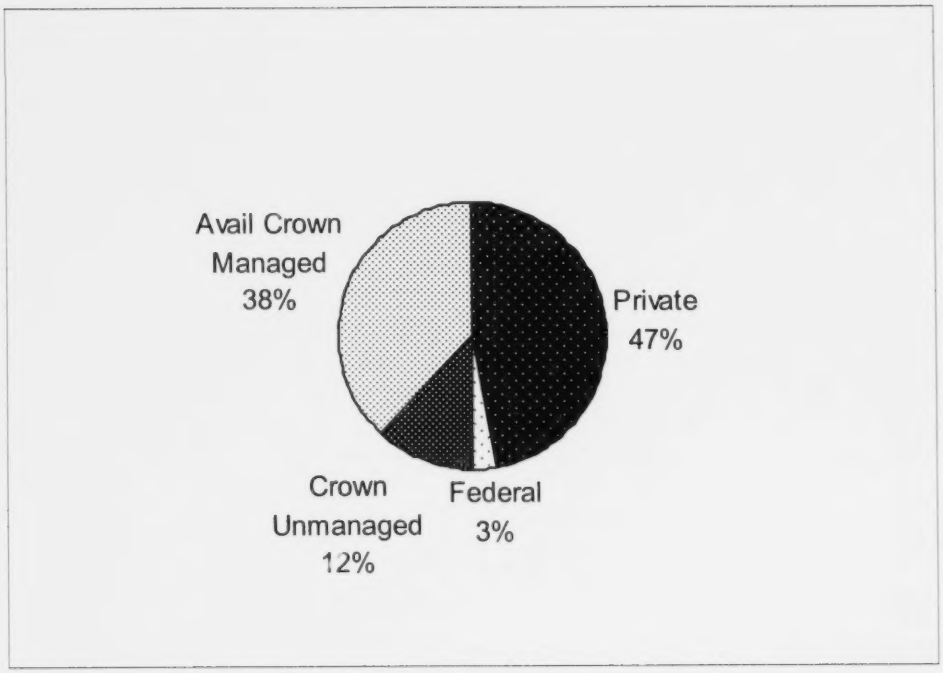


Figure 3. Proportional break out of French-Severn Forest landbase area by ownership and management status.

The French-Severn Forest is considered to be part of the Great Lakes-St. Lawrence Forest, which is typified by deciduous species such as sugar maple, beech, and yellow birch on the richer, wetter sites and red oak on the drier sites, and by coniferous species such as eastern hemlock, eastern white pine, and red pine. The Forest also contains abundant poplar and aspen stands (trembling aspen, large-toothed aspen, and balsam poplar) and white birch. There are numerous other species present in the Forest, some of which are most often incidental species in the Great Lakes –St. Lawrence forest – basswood, white ash, and black cherry – and some of which are more frequently considered to be part of the boreal forest – jack pine and black spruce.

Logging has taken place in the French-Severn Forest for approximately 150 years, with white pine being the initial focus of logging in the 19th century. Since then, many species have been desirable at various times, especially when present as large, high-quality trees. Waves of logging have concentrated on species such as hemlock (for tannin in the 1920's and again for subway pit props in the 1960's) and yellow birch (for aircraft skins in the Second World War), so that many parts of the Forest have been logged 4 – 6 times. As a result, some aspects of the Forest have been heavily modified from the conditions which prevailed prior to the arrival of European settlers. We also note that some of the Westwind shareholder companies are family-owned businesses that have been in existence for many generations and are part of the extensive logging history of the region.

Table 3 shows the major working group species, which are those tree species that comprise 5% or more of the total production forest area. The data are shown for the entire forest and also for the Crown managed portion only. On both landbases, hard maple is by far the predominant species. The most striking difference is the high proportion of white pine in the Crown managed forest, due in part to the predominance of white pine on the Georgian Bay coastal area and perhaps also to Crown management policies encouraging pine retention. Additionally, the use of the uniform shelterwood system on Crown land probably also contributes to the higher proportions of pine.

Table 3. Major Working Group Species Production Forest Area (ha) and Percentage of Total Production Forest Area.

	All Ownerships		Crown Managed	
Working Group	Area (ha)	Percentage	Area (ha)	Percentage
Maple, Hard	395,119	49.7	151,829	47.8
Maple, Soft	48,918	6.2	7,188	2.3
Poplar	64,929	8.2	26,300	8.3
White Pine	88,824	11.2	61,914	19.5
Balsam Fir	48,637	6.1	13,950	4.4
TOTAL	646,427	81.4	261,181	82.3

(Source: FMP-2; 2004 FMP)

On the entire forest landbase, the area of the spruce, hemlock, and red oak working groups was between 2 and 4% of production forest area, while ash, white birch, yellow birch, jack pine, red pine, and other conifer are each less than 2% of the production forest area. These area figures provide some indication of the relative variety and abundance of commercial tree species in the Forest. However, many of the species, especially the mid-tolerants – yellow birch, ash, white spruce – rarely grow in sufficient concentrations to be the lead species in a stand and thus be identified as the working group. However, these species are nonetheless widely present throughout the Forest. (Species such as basswood and black cherry are not even listed in the inventory, so rarely do they constitute the leading species in stands in the French-Severn Forest.)

On the Crown managed forest, half of the forest area is managed as an all-aged forest – these working groups include ash, yellow birch, hemlock, hard and soft maple, and other hardwood. Thus, it is less meaningful on this forest to consider the age class structure as an indication of forest condition. Nevertheless, Figure 4 shows the area by age class of the forest units managed on an even-aged basis. The Figure shows that the Forest is mid-aged, with almost 70% of the even-aged forest area being between 81 and 120 years of age. Roughly 10% is older than 120 years of age.

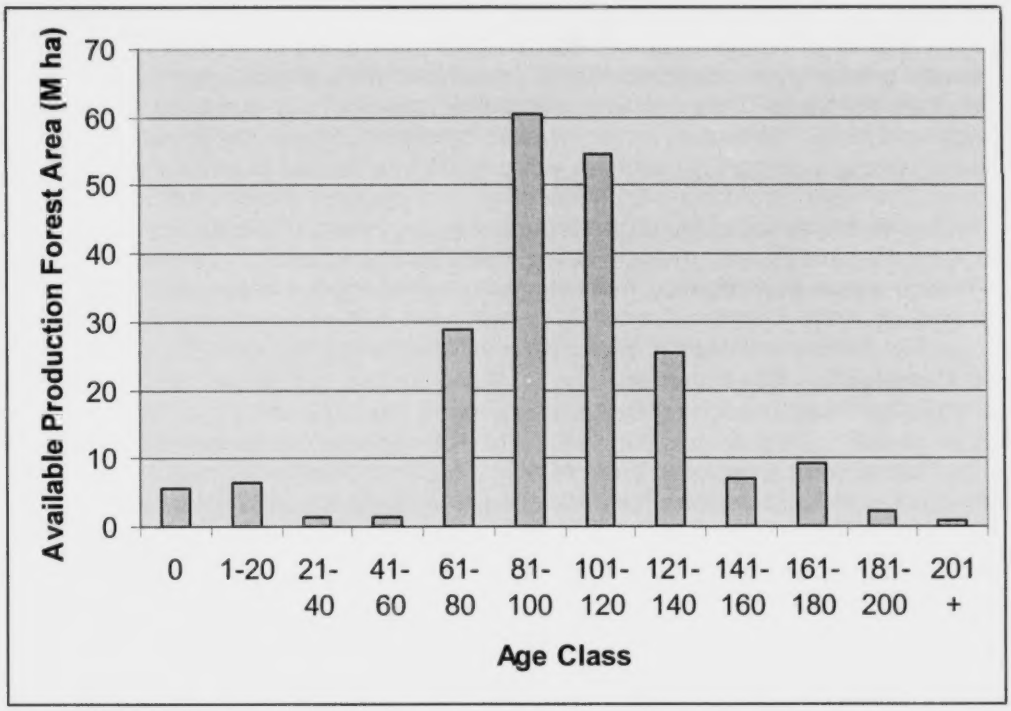


Figure 4. Production forest area by age class of even-aged forest units on Crown managed land in the French-Severn Forest. (Source: FMP-9, 2004 FMP)[5]

There several other key aspects of the Forest that deserve mention in order to set the context for this audit. Perhaps the major factor is the very high level of recreational use and tourism in the Forest. The Georgian Bay and Muskoka areas are very popular for cottaging, and most lakes of any size are ringed with cottages, which are increasingly being converted into homes that can be used year round. There are also numerous lodges and camps in the region. Hunting and fishing are popular pursuits, with deer being the most important game species, followed by moose.

The forest area is also well populated with year round residents, who reside in communities or in more rural settings. There are some key differences between the perspectives of the year round and seasonal residents, most notably their attitudes towards logging and wildlife. There are also substantial income differences as well. These divergent viewpoints have the potential to create conflict from time to time, and both the Company and MNR are cognizant of the need for consultation and discussion with all stakeholders.

Finally, the Forest is well accessed by a variety of provincial, municipal and private roads, as well as many snowmobile, hiking, and all-terrain vehicle (ATV) trails. There

[5] Forest units managed on an even-aged basis include those managed under the shelterwood system: white pine, tolerant hardwoods, oak, and some mixedwoods, and those managed by clearcutting: intolerant hardwoods (poplar and white birch), lowland mixedwoods (black ash, cedar and black spruce), jack pine, and some mixedwoods. Note that the majority of tolerant hardwoods are managed by the selection system and are not included in Figure 4.

are numerous road maintenance arrangements, and the quality of roads is variable. There are also large numbers of off-road enthusiasts, and access management is problematic in that it is almost impossible to prevent ATV users from using decommissioned roads if they are determined to do so.

2.2.3 Relevant Forest Management Issues

Several issues are identified below as long-running, pervasive challenges to management on this Forest. In some cases, these issues surfaced in the previous IFA, while in other cases they reached greater prominence during the review period than they had previously.

Forest Complexity / Old Inventory

The Forest Resource Inventory (FRI) used to prepare the 1999 and 2004 FMPs was based on photography undertaken in 1987. The FRI has been updated since 1987 (after 1998 this became the responsibility of Westwind, but in 2005 reverted back to the Crown) but the photography on which the updates are based is quite outdated. Moreover, many of the earlier partial harvests undertaken during the period of MNR management have not been captured in the updates, in part because the FRI was not designed to capture partial harvesting.

One of the implications of this is that the Company needs to inspect as many of the sites that are allocated for harvest in the FMP as possible to ensure that there is sufficient timber to make harvesting appropriate and worthwhile. Site visits are also required to definitively assign tolerant hardwood stands to either the selection or shelterwood forest units. Unreliable or incomplete forest cover information increases the amount of bypass and the number of FMP amendments and AWS revisions, when the Company finds that allocated areas are unsuitable for harvesting. Given the recent return of inventory responsibility to the Crown, and the timeline for completing an inventory, the Company will have to make do with the current inventory for the 2009 FMP.

Abundance of low-quality hardwoods / Low utilization levels

Past harvest practices have created a large area of high-graded tolerant hardwood stands. These stands may have relatively high or low volumes, but the overall timber quality level is poor. The relative abundance of low-quality hardwood timber in relation to demand for it means that it has little value. The poorest quality stands tend to be in the Georgian Bay tolerant hardwood selection forest unit, which covers 31,000 ha or 10% of the managed Crown forest landbase. The present marking prescriptions call for upgrading the stands through the removal of low quality stems, and leaving higher quality stems, especially of younger material, for future harvests. This prescription has a present day cost, and harvests in these types of stands are usually only economically viable when the stand has a relatively high volume.

This situation has led to a very low proportion of the planned area actually being harvested in these stands. During the period of the 1999 FMP, only 10% of the planned harvest area in the Georgian Bay selection stands was actually harvested. In contrast, almost 50% of the harvest area in the Bracebridge tolerant hardwood selection forest unit, which is better in quality, was harvested and roughly 80% of the tolerant hardwood shelterwood was harvested.

This situation creates a number of challenges for the Company. The major one is that harvesting is the means by which these stands can be upgraded, and its lack of attractiveness makes it difficult to undertake. The Company has been paying operators to undertake stand improvement work (felling of unmerchantable, low quality material) in low volume, low quality stands, otherwise they will not be harvested. Given the strain on the Company's renewal budget, and the possible reduction in Forestry Futures Trust funding (discussed below), harvesting in these stands is expected to decline, prolonging the situation.

While the root causes of this situation are beyond the scope of the Company or MNR to resolve quickly (i.e. poor industrial conditions of high input costs and relatively low product prices), it is nevertheless identified as an issue of importance which will be further discussed below (See Section 3.4.2).

Silvicultural Funding

The overall quality of the timber on the French-Severn Forest tends to be below the regional norm. This is due to a high proportion of rocky and thin-soiled sites, particularly on the Georgian Bay side of the Forest, and past management history. There is more backlog area than had been anticipated at the time of the formation of Westwind, particularly failed renewal under shelterwood in white pine. Shelterwood management of pine tends to be expensive even if renewal is successful, since the yield per harvest entry is low (e.g. estimated at 40 m^3/ha/cut under a four-cut shelterwood in French-Severn, versus 80 m^3/ha/cut in Algonquin Park), there is a higher percentage of lower quality wood, and there is vigourous hardwood competition.

All of this means that renewal costs are higher than the regional norm, and consequently the Company is going to have difficulty funding its desired renewal program in coming years. The Company has benefited greatly from Forestry Futures Trust funding to treat backlog areas and conduct stand improvement, but the Audit Team feels that this could be reduced in future years, due to a recent jack pine budworm outbreak which may attract many proposals for Futures Funding to help renew the areas of mortality.

Responding to this situation is a key challenge for the Company.

3 SUMMARY OF AUDIT FINDINGS

3.1 COMMITMENT

The Company and the MNR both exhibited a very high degree of commitment to sustainable forest management, and the effect of this was strengthened by the high level of cooperation between the District MNR and the Company.

The Ministry of Natural Resources has hierarchical policy direction that centres on sustainable forest management. This begins with the terms of the Crown Forest Sustainability Act (CFSA) and extends through to policy documents (e.g. Policy Framework for Sustainable Forests), terms and requirements of the licence, and forest management guidelines. MNR staff are knowledgeable of their corporate policies and legislation related to sustainable forest management (SFM).

The Company's commitment is outstanding. It was the first Canadian forest to be certified under the Forest Stewardship Council's (FSC) protocol, and it passed its re-certification audit in the fall of 2006, five years after its initial certification.

The Company web site prominently displays its mission and provides a company profile, annual reports, and information on upcoming events. The web site is very interactive, encouraging feedback and commentary and providing maps of the upcoming harvest allocations, and an overview of the planning process.

The Company also undertakes proactive outreach. One of Westwind's most notable initiatives has been the organization and hosting of a series of conferences titled "Your Forest, Your Choice". Funding for these has been provided by the Ivey Foundation, with contributions from FedNor as well. This program was deemed worthy of a best practice in the previous IFA, and it has continued to explore a variety of forest-related topics. The conferences are aimed at everyone from practicing professionals to private land owners to First Nations and other members of the interested public. There have been 13 conferences to date, and during the audit period, they were scaled back to one per year. This initiative exemplifies the innovative and proactive spirit of the Company, as well as its strong interest in public outreach.

The Company has established a range of partnerships with various local organizations, and the manager has initiated contact with municipal governments to educate them regarding the role of Westwind and the interactions between municipal policies on such things as roads and tree-cutting. The Company has also made some progress in developing relationships with First Nations, including adding a First Nations Board member in 2002.

Best Practice # 1

The Company, with strong support from District MNR, has demonstrated a very high level of commitment to forest management, and has proven to be innovative and proactive in a number of areas, including accessing funding, enhancing public awareness, and engaging stakeholders and the general public.

3.2 PUBLIC PARTICIPATION

3.2.1 Local Citizens Committee

The Local Citizens Committee dates from 1996, and many of the current members have served on the LCC for at least five years. During the majority of the audit period, the LCC operated under Terms of Reference developed in 2002. At the time of the audit, the LCC, under the guidance of the MNR, was revising its terms of reference to comply with the requirements of the 2004 FMPM. Many LCC members felt that the current process of revising the Terms of Reference has been useful.

There were 13 LCC members at the time of the field audit, representing a range of interests. Many of the significant forest user groups were represented on the LCC. However, representatives of a number of interests listed in the 2004 FMPM as being desirable components of the LCC were absent, including:

- local business;
- Crown land recreational users other than hunting, angling, snowmobiles, etc;
- woodsworkers,
- water power,
- Chamber of Commerce member or Economic Development Officer;
- local environmental group;
- local heritage group; and
- the general public at large.

Consistency of representation of some interest groups was identified as an issue in the previous IFA, and although involvement of a First Nations representative declined during the period being audited, LCC membership appears to have stabilized during the audit period. Efforts that have been made to recruit a broader spectrum of interests have had some success. LCC members stated that the LCC initiated requests to add a representative for the mid-sized forest companies and from the local snowmobile club that proved to be successful.

Despite the large number of interest groups listed above as being absent, the LCC was generally regarded as functioning well. People felt that all members were able to speak their minds and people generally respected the different perspectives voiced around the table.

Attendance was quite good at meetings, and there were no problems reaching a quorum, since the Terms of Reference required only 25% of the membership to be present. Meetings generally alternated between Parry Sound and Bracebridge to facilitate attendance. There were usually at least four to five LCC members in attendance at the information sessions held during plan preparation and at the Your Forest, Your Choice conferences. It is also noteworthy that members were active in organizing and attending tours and workshops – most interview subjects remarked on the enthusiasm and participation of LCC members. The LCC chair served as the LCC representative to the planning team. LCC members felt that the MNR staff played an appropriate role in hosting and supporting the LCC. The one instance that was mentioned by LCC members as an exception concerned the bump-up of the 2004 FMP. The bump-up arose due to a concern about the impact of logging on a trail-based tourism business and the LCC had several meetings focused on this issue; MNR

brought in outside resources to assist in their deliberations. The LCC was quite interested in following the process, and felt that they did not get sufficient or timely information, and are still not sure of the status of the situation. However, the Company reported that updates on the bump-up were provided regularly, and perhaps these comments came from LCC members who did not attend regularly.

Some LCC members observed that only three LCC meetings were held last year, and that a higher number of meetings would be beneficial. Six meetings were held in 2002, and seven in 2003, when the FMP was being prepared. For new members, having only a small number of meetings per year makes it harder to establish a rapport with other members – the Audit Team feels that quarterly meetings should be held at a minimum, in addition to creating opportunities for tours and workshops.

Suggestion # 1

The LCC Terms of Reference should set a target for a minimum number of meetings to be held each calendar year.

LCC meeting minutes were sufficiently detailed, and well-organised with appropriate attachments. The LCC report associated with the FMP was well done; it was developed by the LCC Chair and includes major issues, conclusions and a Chairman's statement. All LCC members were mentioned and delivered the report to MNR. The LCC also shared its meeting minutes at open houses.

The July 24, 2006 draft terms of reference for the LCC identified a First Nations representative on the LCC but LCC members indicated that First Nation representation was inactive. Throughout the audit period, First Nations representation has been limited, despite steady recruitment effort and an open door policy for any First Nations person(s) that indicated interest in participating. LCC members realized that this was a key gap.

A major reason for this is that there are significant differences and circumstances among the various First Nations communities such that no one individual can represent them all. This can be depicted by the challenges the previous First Nation LCC member faced trying to obtain consensus with the other First Nation communities. Generally, the tendency on the part of non-native people to believe that First Nations are quite similar and share most perspectives is not accurate and creates unrealistic expectations that are uncomfortable for a single First Nations representative.

The Audit Team was told that the LCC, in cooperation with the MNR, had tried to establish a separate sub-committee for First Nations concerns, due to the diverse number of constituents. They were unsuccessful in establishing this group. The main reason for this is, as both MNR and the Company observed, that many of the First Nations with an interest in the Forest see forestry as a relatively low priority for economic development. With other more attractive options and limited capacity in the forest sector, the result has been sporadic participation by First Nations people.

This suggests that the design of the current LCC approach cannot adequately accommodate the range of First Nations perspectives and interests, especially in forests such as the French-Severn which have numerous and varied interested First Nations. It is important to note that the First Nations have opted out of a separate consultation process (as discussed below), however, there have been frequent personnel changes in

the relevant human resource positions both within the First Nations and the MNR that have made it difficult to maintain relationships and work on the pertinent issues. For example, MNR is currently seeking to fill the position of 'Native Liaison Officer' which has seen some turnover in the recent past. The idea of a First Nation sub-committee that contained representatives from each First Nation community may be appropriate to the French-Severn circumstances, and Recommendation # 3 is intended to address this.

Most recently, and outside of the audit period, a sub-committee has been established to deal specifically with all types of recreational trails in this forest, and is referenced in the recently-revised LCC terms of reference. The trail sub-committee is in its infancy, having only had a couple of inaugural meetings to set in motion terms of reference for their role in advising the LCC. Given the importance and challenges associated with trails, and the LCC's interest in trails, this is an important and potentially very useful approach that bears monitoring.

3.2.2 FMP Standard Public Consultation Process

As described below, the Company and MNR exceeded the requirements of the standard public consultation process for some aspects related to the development of the 2004 FMP, but as will be discussed below, native media were not used and the invitation for the public to participate could not be found and so the Audit Team is not certain whether all mandatory steps were followed. Accordingly, the following recommendation is provided:

Recommendation # 1

That MNR ensure that the Terms of Reference for the 2009 FMP include a protocol for retaining planning records and documents.

On the positive side, the Company and MNR used a wide variety of channels to reach members of the public, including the web, radio, newspaper advertisements, and a newsletter titled "Forest Management Update". The Company also posted additional newspaper advertisements in a more reader-friendly style than the standard format. Despite the additional and innovative effort, public participation was on the low side of satisfactory.

As indicated, native media were not used to provide notice of opportunities for input during the standard planning process. Notices are not always posted on Band Council bulletin boards, which potentially leaves a gap in the Native demographic. There are several native newspapers that could be used to provide notice, and these tend to be read by First Nations people and so represent a potentially effective way of contacting them. In the French-Severn Forest area, two First Nation newspapers are Anishinabek News (offices in North Bay with a print run of almost 12,000 copies) and Turtle Island News (published by Six Nations of the Grand River). Some individual First Nation communities also have newsletters that could also be used to publish notices.

Recommendation # 2

That the MNR post public notices in local Aboriginal media.

Suggestion # 2

In order to communicate more effectively with First Nations, the standard MNR notices and invitations could be augmented by the publication of a more reader-friendly ad.

3.2.3 Native People's Consultation

There are seven First Nations with an interest in the French-Severn Forest:

- Henvey Inlet First Nation
- Magnetawan First Nation
- Shawanaga First Nation
- Wasuaksing First Nation
- Moose Deer Point First Nation
- Wahta Mohawks
- Dokis First Nation

The relationships with communities and the MNR and Westwind are generally good, but they vary by community. In some cases, the communities seem to have little reason to engage with the Company and so there is little interaction. During the audit period, relatively frequent changes in staffing of the MNR liaison person and some First Nations forestry and/or economic development positions have interrupted the flow of discourse. As a result, the information flow and the community representatives' understanding of forest management planning roles and responsibilities has diminished during the audit period. The Audit Team also found that there was generally a lack of understanding of the importance of Native Value Background Reports and Values Maps within the First Nations; at the same time, MNR does not seem to have approached First Nations to update values reports and maps for the 2004 plan. In the Audit Team's interviews with First Nations representatives, some expressed interest in revitalizing these documents.

The Audit Team concludes that the relationships between Westwind, MNR and local First Nations communities have drifted during the latter part of the audit period, and in some cases, would benefit from an injection of energy. While the Audit Team acknowledges that some First Nations communities are unlikely to desire more frequent interaction with MNR and Westwind, some interview subjects indicated that there could be interest in re-engaging.

Recommendation # 3

That the MNR re-engage the First Nations to evaluate their interest in establishing a regular dialogue on forestry opportunities and other forest issues, such as updating Native Values Maps.

If there is sufficient interest, MNR might consider forming a separate body as a forum for forest management issues, as had been attempted previously (See Section 3.2.1). The MNR could consider the Aboriginal Working Group convened by the Nipissing Forest[6] as a potential approach. If there is only interest from a small number of First Nations, alternate arrangements could be made, including bilateral or multi-party discussions.

[6] Nipissing Forest Independent Forest Audit April 1, 2001 – March 31, 2006. Arborvitae Environmental Services Ltd. Final report dated October 18, 2006.

3.2.4 Annual Work Schedule Public Inspection

MNR is required to publish a public notice indicating that the approved Annual Work Schedule (AWS) is available for inspection. This notice must be issued at least 15 days prior to the commencement of operations, which allows opportunity for the public and First Nations to see what activities will be occurring on the French-Severn Forest in the coming year. Information of particular interest to the public and First Nations includes the timing and location of herbicide spraying, renewal and tending operations that may provide local employment, the timing and location of slash pile burning or prescribed burns, and the availability of public fuelwood.

AWS inspection notices often serve as the notice of herbicide application operations, as is permitted by the FMPM, and this was the case on the French-Severn Forest during the audit period.

The Audit Team could not find proof that inspection notices were sent to First Nations. MNR staff stated that they generally sent notification of herbicide spraying to First Nations that they thought might use the Crown land being sprayed. Generally, MNR considered a First Nation to be potentially affected if there were blocks within approximately 10 miles of their territories, but there were none in the current FMP and so no notices might have been sent. The Audit Team feels that because many First Nations community members may go further than ten miles to use the landbase for various purposes, all First Nations should be notified.

Recommendation # 4

That the MNR ensure that all First Nations communities who use or have interests on the French Severn Forest are sent public notices for any aerial herbicide spraying.

The Audit Team also feels that notices should be published in First Nations media to have greater reach. Recommendation # 2 above deals with this.

3.3 Forest Management Planning

3.3.1 Planning Team Activities

The review of the planning process focused on the production of the 2004-2024 FMP for the French-Severn Forest. The Terms of Reference (TOR) formalize the establishment of the planning team and contain a detailed schedule for plan production, review and approval. The planning team was formally established on January 13, 2002 and held its first meeting on February 15, 2002. The TOR was approved by the MNR on March 25, 2002 coincident with the notice for the Invitation to Participate, meeting the 1996 FMPM requirement for TOR approval prior to the commencement of planning. The TOR were revised at least once; a July 5, 2002 revision accommodated changes to the plan production, MNR review and approval schedule.

The TOR listed thirteen planning team members, representing MNR (9), Westwind (2), the LCC (1) and a clerical services consultant (1). The approved FMP lists the same planning team members with only the addition of the First Nations representative. Thus,

turnover of planning team members was not a factor as virtually the entire planning team remained involved throughout the entire process.

In terms of professional representation, the planning team consisted of 4 foresters, 4 biologists, 1 planner, 1 geographic information system (GIS) specialist, 1 forest management clerk, 1 LCC member, 1 First Nations liaison, and 1 First Nations representative. These capable and experienced planning team members were supported by up to 28 MNR/SFL planning team advisors and the LCC. Overall, there was excellent representation of qualified professionals and stakeholders to address all FMPM planning requirements.

Review of planning team meeting minutes shows that 12 meetings were held between February 15, 2002 and February 16, 2004, with a gap of more than 3 months between the first two meetings because of the Ontario Public Sector Employees Union (OPSEU) strike. Attendance at meetings by most planning team members was good but notably poor for some (MNR First Nations liaison and First Nations representative). Minutes were generally well written and of sufficient detail to provide useful summary information, however, there was little documentation of follow-up to action items.

Sufficient information and resources were generally available to planning team members to support their role in planning, and despite some minor delays, the planning team fulfilled its role in the planning implementation of the FMP, evidently as a result of the good working relationship between SFL and MNR staff.

For the development of the next FMP, Company staff indicated that they intend to improve the quality of minutes and better document the follow-up to action items. They also identified the need to explicitly define the agenda and set targets for meetings. A dedicated project manager (co-funded by MNR and the Company) will assist the planning team to more effectively achieve its objectives in this regard.

The methods used to communicate with the public were in accordance with FMPM (1996) requirements for the Public Consultation Process, with the possible exception of the advertisements for the Invitation to Participate, which could not be found (See Recommendation # 1). Information Centres were held with reasonable levels of attendance. Supplemental newspaper advertisements and mailings of Westwind's Forest Management Update pamphlet in advance of the Second Information Centre exceeded FMPM consultation requirements. This high-quality pamphlet was an example of exceptional public outreach during the forest management planning process.

Best Practice # 2

Westwind made exceptional efforts at public outreach during the development of the 2004 FMP, including the Forest Management Update pamphlet produced in advance of the Second Information Centre.

Members of the LCC signed attendance ledgers for the First and Second Information Centres, however, planning team members did not. Although it is likely that most planning team members did attend, it was not possible to verify this without contacting each member. As a result, the Audit Team suggests that the planning team for the next FMP institute an administrative procedure to ensure that attendance ledgers are signed. On other forests, planning team members sign the attendance ledger upon arrival or

sign a separate ledger. Either approach will ensure that all members are accounted for.

Suggestion # 3

The planning team for the 2009 FMP should implement measures to document Information Centre attendance of its members.

The Summary of Public Consultation contains a very detailed accounting of all comments received during the planning process and all responses made by MNR and the plan author. Responses appear to have been very detailed and for the most part, timely. Although many replies to questions were within the 15-day MNR Public Correspondence Service Standard, just more than half took between 4 and 8 weeks and some even took as long as 4 or 5 months. As a result, the Audit Team makes the following recommendation:

Recommendation # 5

That the planning team for the 2009 FMP develop strategies to ensure that public correspondence is answered in as timely a manner as possible.

3.3.2 Resource Stewardship Agreements

There is a very high number of tourism operators in the French-Severn Forest, 174 of which are licensed by the Ministry of Tourism. The Company, with support from MNR and the Ministry of Tourism, initiated the RSA development process to coincide with the development of the 2004 Forest Management Plan. There was very little response from tourism operators, and the net result has been the conclusion of three RSA's. These were all concluded after April 1, 2004, when the new FMP came into effect; there have been no subsequent FMP amendments as a result of conditions associated with the RSAs. The relationship between Westwind and RSA-holders appears to be good; one RSA operator who operates trail–based tours has recently added an educational component to one of his recreational trails that includes a number of sites where forest operations have been undertaken by Westwind.

3.3.3 Sources of Direction

The FMPM requires that forest management plans pay heed to a variety of sources of strategic and planning direction, including:

- MNR's provincial goals, objectives and policies for natural resource management;
- Forest management guides (implementation manuals);
- Applicable regional- and district-level land use direction;
- MNR internal operational audits and independent audits for the management unit;
- Strategic business direction for forest-based businesses;
- The results of ongoing negotiations with Aboriginal peoples whose communities are situated in the management unit; and
- Licences regarding resource management on the Forest.

This audit found adherence to all key elements of the sources of direction. The 2004 FMP is a well-written document and makes consistent use of, and reference to, relevant sources of direction. Examination of field practices also satisfied the Audit Team that the

sources of direction were adhered to during operations. As all audits do, this audit identified some instances in which adherence to management direction should be improved, and this is reflected in several of this audit's recommendations. However, considered as a whole, the Audit Team is satisfied that relevant sources of direction have been followed.

3.3.4 Plan Introduction

The Introduction section of the 2004 FMP contains the elements required by the FMPM, including an index to the environmental components of the Plan and a brief description of how MNR's Statement of Environmental Values under the Environmental Bill of Rights had been considered in plan development.

3.3.5 Management Unit Description

The management unit description in the 2004 FMP is complete and excellent. The plan provides a good description of the Forest's geology and soils and provides sufficient information to link these descriptions with management of the Forest. Key interactions and natural processes are full and well-explained. The description of the logging history and human settlement is comprehensive and there is informative text describing changes in the nature of the Forest; the current forest condition is well described; and there are excellent descriptions of the wildlife and "non-timber" resources on the Forest.

Forest Resource Inventory (FRI)

The FRI that was used in the preparation of the 1999 and 2004 FMPs was based on 1987 photography. It has been updated a number of times, by the addition of operational cruising data, and by the addition of records of depletions and removals. The move to digital inventory, provided by MNR FRI section in late 1997, created some issues with "sliver" stands and stand ages on the Bracebridge side that have largely been corrected. There is a good description of the history of this particular FRI in the main body and Supplementary Documentation D of the 2004 FMP.

Issues faced in an attempt to keep an accurate and current FRI in this Forest are not insignificant. Furthermore, the FRI is not particularly well-suited to tracking the quality of standing timber or the complexity of multi-stage stands. The Audit Team observed that these are some of the reasons that a large portion of the planned harvest area chronically goes unharvested.

Earlier in 2006, AVES audited the Nipissing Forest, which experiences many of the same challenges with respect to the FRI. Nipissing Forest Resource Management, the SFL-holder on that Forest, had developed and implemented survey and inventory management procedures that effectively created a continuous forest inventory. This was cited as a best practice in the Nipissing IFA, and leads to the following suggestion.

Suggestion # 4

Westwind and the associated MITIG staff should arrange to meet with the management staff of Nipissing Forest to review Nipissing's silvicultural tracking and inventory update system.

The following recommendation is intended to provide a better starting point for a revised inventory management system.

Recommendation # 6

That Westwind secure a new FRI coverage as soon as possible.

Along with other updating exercises, Westwind undertook an exercise to identify inaccessible / inoperable stands that had been included in the Crown Managed Productive Forest in previous plans. This area has been classified as Crown Unmanaged Productive Forest in the 2004 FMP.

3.3.6 Objectives and Strategies

Appropriately, in the view of the Audit Team, the planning team for the 2004 FMP decided to maintain the general management direction of the 1999 FMP. Key directions of management include:

- improving the quality and condition of forest stands that have experienced high-grading and poor renewal in the past;
- increasing the abundance of species that are less abundant in the current forest than they had been historically, including red and white pine, hemlock, yellow birch, red oak and white ash; and
- increasing the proportion of the planned harvest that is actually cut.

Planned management directions also include meeting legal and policy requirements, working well with other forest stakeholders, supporting First Nations forest-based initiatives, and maintaining biological diversity, ecologically sensitive sites, and other key forest values. The 2004 FMP describes the results of the assessment of the mandatory management alternatives, and a fourth management alternative that continued existing direction was developed and selected.

The objectives from the 1999 FMP, and the degree to which they were achieved, are reviewed in Table 9. Table 10 shows the 2004 FMP objectives and a preliminary assessment of the extent to which they are being met.

The 2004 FMP is a well-crafted document, and the set of goals, objectives, targets and strategies is logically organized. A review of the set of objectives from the 2004 FMP shows that many of them contain a considerable number of five-year targets. This is a substantial improvement over the previous plan, because it provides meaningful operational targets as well as a basis for assessing the Company's progress and commitment to its objectives. The Company has also further refined its organization of biodiversity objectives and targets, adding a set of site level objectives and targets to those for the landscape and genetic levels.

The Audit Team also noted that the 2004 FMP used the year 2034 as the "Defined Future Forest Condition" (DFFC) target date. Therefore, the plan is oriented around the achievement of all of its targets and objectives by that date. In our experience, FMPs from other forests in Ontario set the DFFC at least 80 years into the future, and most often, it is 100 years into the future. We find that the use of a relatively early DFFC, as

the Company has done, is much more practical than the use of one far into the future. It lends a degree of practicality to the plan, as the actions identified in it are more tractably linked with the desired forest condition than they would be if the DFFC was 100 years into the future. The Audit Team commends the planning team for selecting a very meaningful DFFC target date.

One flaw in the 2004 FMP concerned Table FMP-13, which is an important component of the assessment of management alternatives. Table FMP-13 provides a quantitative comparison of the alternatives relative to the objectives identified in the plan and the minimum and maximum acceptable levels of the indicators of sustainability. Table FMP-13 in the plan contained many errors in the minimum acceptable levels of indicators of sustainability. This led to difficulties for the Audit Team in verifying the rationale for the selection of the chosen management alternative and in confirming its sustainability. Correct values, which were identified through an assessment of SFMM output, verified that the rationale for selecting the management alternative was sound. Nonetheless, the Audit Team believes that the table should be corrected, both to maintain the integrity of the plan and to provide accurate information for future analyses of the plan that may be undertaken.

Recommendation # 7

That the Company correct the errors in Table FMP-13 of the 2004 FMP and submit an amendment consisting of the corrected table.

Although the quality of the 2004 FMP is high, the Audit Team is concerned that the actual harvest level will likely be much lower than the planned level of harvest. As the Forest Manager's Report indicates (See Appendix A), this pattern has existed on this Forest for some time. The actual harvest area was 47% of planned during the 1994-99 FMP period, and 38% during the 1999-2004 FMP period. The previous IFA also expressed concern over this situation and issued a recommendation that was followed but which did not prompt the 2004 planning team to depart from the normal practice of setting the planned harvest level at or close to the allowable level.

The primary reasons for the under-harvest have been described above, and there is no indication that the situation will change materially in the foreseeable future. While there are reasons to think that perhaps someone might build a mill or bioenergy facility that would use a lot of the low grade fibre produced from this Forest, the industry is in poor health at present and closures are at least as likely as the opening of new mills. The point is not to attempt to predict the future, but rather to note that there are no concrete prospects for a change in utilization level in the foreseeable future and so it seems to be reasonable that measures should be taken to align the planned level of harvest with a realistic actual harvest level.

There are several reasons for the Audit Team to take this view. The first is that the credibility of a plan that projects a harvest that is likely to be more than twice the actual level, despite consistent experience to the contrary, would seem to be open to question. This is not a minor deviation, and leads one to question the value of all of the person-years and cost put into developing a plan that, in essence, will not be followed. The second concern is that not only is the actual harvest likely to deviate from the planned level, but the provision of all other forest values, and the condition of the forest, will also differ from that laid out in the plan. The differences between the planned future forest

and the actual future forest, if low harvest levels persist, will increase further into the future. The third concern is that by over-forecasting the harvest, the planning team has forgone opportunities to plan for increased levels of other values. Had a lower harvest level been forecast, the plan could have made greater provision for other values, such as (for example) habitat for species which are currently expected to have declining habitat, or for characteristics that might have been more conducive to the quality of recreation. When these three concerns are put together, it can be seen that planning overly high harvest levels weakens the credibility and value of the planning process, and potentially leads to sub-optimal use of the forest.

There are a number of possible avenues for rectifying this situation, including reducing the planned level of harvest, netting down the landbase by removing marginal areas (e.g. economically inaccessible areas or more of the thin-soiled sites) from the available landbase, or stimulating demand. More likely, some combination of the above may form the eventual solution. We note that in the 2004 FMP, the Company shifted some tolerant hardwood area into the shelterwood forest unit, and reduced the planned number of entries in the white pine shelterwood unit, which will improve the economics of harvesting these stands and should improve utilization of the available harvest to some extent. These are creative measures but they have not been in place long enough for the results to become known, and it is expected that further steps will be required.

There have been a variety of efforts by MNR to stimulate increased demand for underutilized species and low quality hardwoods in the southern region. To date, these have not materially affected the demand for these species on the French Severn Forest. It is possible that something will trigger an increase in fibre demand, perhaps as a result of using wood for bioenergy, or for the production of more traditional forest products. There is also the possibility that the use of tendered sales, as was formerly done, might stimulate demand. The Audit Team feels that it is likely that conditions in the sector will need to improve before there is meaningful increase in wood demand, and so efforts to increase demand are probably not going to bear fruit in the near term.

The available forest includes areas that are not economically accessible under current conditions, stands that are isolated (perhaps because they are surrounded by private land), and stands with little volume and quality on difficult sites. These stands are unattractive to operators and a number are probably not really available and should be netted out of the landbase. It is noted that in preparation for a 1996 FMP, the Area Forester on what was then the Minden Crown Management Unit (now part of the Bancroft-Minden Forest) reduced the available Crown landbase from 66,000 ha to 42,000 ha by removing "stands that were too isolated, inoperable or were unsuitable for sustained yield production".[7] The result was "more reliable levels of planned harvestable areas than in the previous planning periods". Such an exercise might be appropriate on the Westwind Forest.

Finally, the planning process provides mechanisms for setting a planned harvest area below the allowable harvest area (AHA), even though it is customary for planning teams to match the planned with the allowable level. The Audit Team is not advocating a reduction in the allowable harvest level, but rather once the allowable level has been calculated, a lower level could be identified as being planned (i.e. expected). The

[7] KBM Forestry Consultants. 2002. Minden Crown Management Unit Independent Forest Audit 1996-2001. Available from http://ontariosforests.mnr.gov.on.ca/publications.cfm#reports

difference between the planned and actual harvest level can be declared surplus, and if unexpected demand materializes, the plan can be amended to add the surplus back into the planned level. Since the surplus blocks would have already been allocated in the FMP and been reviewed by the public and MNR, an administrative amendment would suffice.

The Company has expressed concern that reducing the planned harvest level would penalize those operators who do harvest close to their planned allocations. This is not our intent and we feel that the Company should be able to avoid this, while at the same time setting a fair planned harvest for those overlapping licensees who habitually underharvest their allocation by a wide margin.

The Company has also expressed concern that reducing the planned harvest will require the SFL to be re-negotiated. The Audit Team feels that this may not be so. For example, the ShiningTree Forest, which declared most of the allowable white birch harvest area as surplus in the 2001 FMP, and then amended most of it back into the planned harvest area as demand developed over the course of the plan period. There was no change made to the SFL to accommodate this approach. The SFL for the ShiningTree Forest was held at the time by a consortium of companies operating under ShiningTree Forest Management Inc, which is similar to Westwind Forest Stewardship Inc.

In Ontario, it is the norm for actual harvest levels to be in the range of 70 – 80% of the planned harvest. On the French Severn Forest, past results show that a relatively high proportion of the planned harvest of some forest types is habitually taken, whereas the opposite is true for other forest types. Therefore, it is reasonable to expect that planned harvest levels should be close to, or coincide with, the allowable level for forest units which are in demand. On the other hand, the planned harvest level could be considerably lower than the allowable level for less utilized forest units. Conspicuously underutilized forest units include the Georgian Bay selection tolerant hardwoods (actual harvest has averaged 16% of planned in the past two plans), the clearcut mixedwoods (MWCC) forest unit (10%), hemlock (6%), and lowland mixedwoods (5%).

The Audit Team recognizes that over time a variety of approaches may be required to bring the planned harvest level to a more realistic level, so that the actual harvest level is much closer to the planned. Some of the solutions may take time to implement, and may not provide results in time for the 2009 FMP. The Audit Team feels that the 2009 FMP should contain a realistic planned harvest level, and urges the Company and MNR to consider creative planning approaches. The first recommendation provided below is concerned with the 2009 FMP, while the second recommendation is oriented towards a longer-term solution.

Recommendation # 8

That the Planning Team for the 2009 FMP set a credible, achievable planned level of harvest on the French-Severn Forest.

Recommendation # 9

That the MNR and the Company develop and implement a strategy to bring the planned levels of harvest on the French-Severn Forest into greater consistency with expected levels of utilization.

3.3.7 Operational Planning

Harvest

The 2004 FMP describes the criteria used to allocate stands for harvest, and notes that the planning team was able to allocate areas close to the size of the areas identified in the SFMM analysis as providing the optimum harvest. The one exception was the tolerant hardwood shelterwood forest unit, which was underallocated because the Company often finds stands in the selection forest units that are better suited to being managed for mid-tolerant species using the shelterwood system.

Silviculture

The Silvicultural Ground Rules in the 1999 FMP, with over 240 possible treatment packages, are somewhat cumbersome but include appropriate treatments for the various conditions found on the French-Severn Forest. They were based on the MNR's Silvicultural Guides and were developed with insight from local foresters and technicians. The 2004 FMP was similar with 13 Forest Units and over 420 possible treatment packages. Forest operation prescriptions (FOPs) prepared by Westwind staff were well written with a high level of detail.

The French-Severn Forest is diverse and sometimes challenging to forest managers. Some aspects of silviculture on the Forest appear straightforward and routine, although the Audit Team notes that the extensive experience of many of the forest managers and contractors on the Forest has provided them with the knowledge to develop and implement realistic and appropriate prescriptions. However, some aspects of the silviculture program are challenging. In particular, many of the lower quality tolerant hardwood and pine shelterwood sites on the Georgian Bay side of the forest are difficult to manage because harvesting generates low average volumes per hectare of often low quality timber. These stands are thus more expensive to harvest, on a per cubic metre basis, and the low volumes of low quality material generate a low level of revenue for the Forest Renewal Trust. Also the stands have proven to be more expensive to renew to expected standards, particularly some of the white pine stands.

To better deal with this situation, the management approach for white pine was revised in the 2004 FMP by reducing the number of shelterwood harvest entries from four to either two or three. The lower quality white pine stands are assigned to the two-pass shelterwood system, with the better stands being managed through three harvests. This adaptation increases the volume harvested on each pass, thereby decreasing the per unit harvest cost. It also increases the revenue available to the Renewal Trust Fund per pass, and the increased opening sizes may improve the chance for renewal success by increasing the amount of sunlight reaching the forest floor.

Similarly, roughly 14,000 ha of the lower quality tolerant hardwood stands have been moved out of the selection harvest-based forest units (mostly out of the Georgian Bay Forest Unit) and into the hardwood shelterwood-based forest unit. The motivation is the same, in that the economic return will be more attractive, which helps to improve somewhat the viability of these stands.

Recommendation # 10

That the Planning Team for the next FMP continue to encourage innovative tactics which incorporate current silviculture, harvesting, and economic thinking when developing Forest Units, Silviculture Ground Rules and Treatment Packages (and appropriately match them to forest stands).

Values

As is the case with most SFLs, the MNR District is allocated funding during the FMP planning stage (usually for one or two years prior to, or at the onset of plan initiation) to inventory values on the forest. MNR staff use the available funding to conduct aerial surveys of values identifiable from the air – mostly moose aquatic feeding areas (MAFAs), deer yards, and stick nests. MNR staff survey a portion of the areas initially identified for operations in the FMP, and values records are updated based on the results of these surveys. However, because not all areas which are eventually harvested are included in the plan's initial allocations (due to shifts in operations which occur in response to circumstances not foreseen in plan development), the surveys do not cover a portion of the area harvested during the plan term. Furthermore, because the total area identified for harvest operations is usually not harvested (see discussion in Section 3.3.6), surveys are conducted for areas which are not eventually harvested during the course of plan implementation. Both of these shortcomings of the values surveys (not surveying areas which will be harvested and surveying areas which will not be harvested) are a function of the manner in which the values funding is made available. By making FMP values funding disproportionately available during plan development, the opportunity to conduct more appropriately targeted values surveys is foregone. Funding for all values surveys should be made available on an annual basis so that surveys can be conducted based on the most recent projections of each year's harvesting activities. Supplementary Documentation "C" of the 2004 FMP drew attention to this problem in unequivocal terms: *"Information about critical wildlife habitats is incomplete. One time only funding, insufficient to collect complete critical habitat information on even one type of habitat for one species (e.g. moose aquatic feeding areas) was provided for the preparation of this plan…."*.

Recommendation # 11

That Corporate MNR provide values funding sufficient to collect information for the entire year's allocations on an annual basis.

The Audit Team notes that this is a long-standing and pervasive issue with significant cost consequences; a recent report from the Minister's Council on Forest Sector Competitiveness (May 2005) included the following recommendation:

Recommendation #8:
The Council recommends that the Ministry of Natural Resources provide updated values information for the forest management planning process.

- *the Ministry of Natural Resources must adhere to the Forest Information Manual obligations to provide all non-timber values in a timely manner for use in the forest management planning process; and,*

- *the provincial government should provide a complete survey of streams (including fisheries values) in the area of the undertaking.*

Some MNR funding is used on an annual basis to verify stick nests found during tree-marking and other operations, and to conduct some surveys. The MNR and the SFL holder developed a partnership arrangement, though a Memorandum of Understanding (MOU) which allows for Westwind to hold MNR money for stick-nest work beyond the government fiscal year end. This arrangement allows money to be available when needed and not be constrained by the government fiscal planning schedules. Both parties (i.e. the MNR and Westwind) expressed great satisfaction with this arrangement and were pleased that it allowed funding for stick-nest identification when it was needed.

AOCs

The 2004 FMP contained 34 unique prescriptions for Areas of Concern. Most of the AOCs were group prescriptions, intended to be applied broadly to commonly occurring values. Examples of this type of AOC are cottaging lakes and rivers, designated canoe routes, and moose aquatic feeding areas. Some prescriptions were prepared for individual areas of concern, intended to be applied to unique circumstances. These types of AOCs include tailored prescriptions for the Novar Conifer Peat Forest and the Gray Rapids of the Musquash River.

The total number of AOC prescriptions in the 2004 FMP is somewhat low in comparison with other SFLs in the province. The approach taken seems to be one which combines similar types of values in a single AOC prescription with the provision of a reasonable amount of flexibility in group prescriptions to allow for tailoring to unusual circumstances. This approach implies a good rapport between the Company and MNR as the Company must have engendered the trust of MNR to support this strategy. In any regards, the Audit Team found that the prescriptions were thorough and covered all the important values in the forest. In particular the Audit Team was pleased to find that the AOC prescriptions included one for the protection of the overwintering habitat of the Eastern Massasauga Rattlesnake. The snake is a threatened species in Canada, with much of its range encompassed by the French-Severn Forest.

There was, however, some disagreement between the Company and MNR regarding the AOC prescription for deer winter habitat. Company staff expressed concern that the aspect of the prescription related to critical winter habitat overly restricted opportunities to manage the white pine which may occur in the habitats. MNR staff, on the other hand believed that they had interpreted the direction of the deer guidelines appropriately. MNR staff invested significant effort in conducting field surveys of deer yards to verify their condition and use and assess the thermal cover provided[8]. Spatial modeling using the Ontario Wildlife Habitat Analysis Model (OWHAM) was also carried out. MNR district staff also entrained the assistance of regional staff and a provincial wildlife expert in developing the prescriptions and interpreting the requirements of the provincial deer guidelines[9]. Critical cover provided by deer yards is especially important for deer in the Parry Sound area due to the snow depths which accumulate. The Audit Team believes that the District MNR staff applied appropriate judgment within the bounds of their

[8] Black, R. 2006. Analysis of Thermal Cover in Deer Winter Areas for Parry Sound Area of the French-Severn Forest. Unpublished Report.
[9] Voigt, D.R., J.D. Broadfoot, J.A. Baker. 1997 Forest Management Guidelines for the Provision of White-tailed Deer Habitat. Ontario Ministry of Natural Resources. Queen's Printer for Ontario, Toronto.

mandate, and consistent with MNR's official guides to develop the deer yard prescription. The Audit Team notes that the MNR intends to use the results of the analysis described above to inform the 2009 forest management planning process.

However, the Audit Team is sensitive to the fact that there does not appear to have been much opportunity for training or discourse between MNR and the Company regarding the chosen direction for deer-yard management. Given that the Company is ultimately responsible for implementing the management actions, and that there remain differences of perspective on the utility of some aspects of the approach, the Audit Team believes that training and additional opportunities for discussion are necessary.

Recommendation # 12

That MNR provide training on deer-yard management in the French Severn Forest for Westwind staff and operators, and that the training provide opportunities for discussion of the merits of the selected approaches.

Road Planning

No primary or secondary (branch) roads were planned for construction during the audit period, and none were constructed.

One issue raised by the Company concerned access to areas on the Westwind Forest adjacent to Algonquin Park. The Park Master Plan, which is a binding legal document, prohibits harvested wood from being hauled through the Park (i.e. into the Park and then out again). The Company pointed out that this restriction has had the unintended side effect of complicating access to some areas of the Westwind Forest (and other forest management units adjacent to the Park). An example of this would be a situation where a river loops out of and then back into the Park. In order to harvest the area within the loop, outside the Park, the Company would be required to build a road and construct a water crossing. This could be prohibitively expensive, and effectively foreclose access to the timber. If there was already a nearby road inside the park that could be used to access the area, the Master Plan would forbid its use.

The Audit Team recognizes that there would need to be a very strong rationale to open up the Park Master Plan for revision, and that the issue of wood being hauled through the Park does not meet this test. The Audit Team also recognizes that the Park is not a typical forest management unit and that the area available for harvesting in the Park cannot be treated as equivalent to Crown forest available for harvesting in other forests, such as Westwind, for example. However, the Audit Team feels that there may be a few situations in which the Plan direction leads to greater environmental impact on the Park, rather than less.

The more fundamental issue is control of access into the Park, and the management of access along the Park boundary. This involves balancing the impacts of new roads with the foregone opportunities created by the new roads, which includes foregone harvest opportunities. The creation of new access roads that cross the Park boundary, or that come right up to the boundary outside the Park, can be detrimental to the Park's ecological integrity. The Audit Team believes that when the Park Master Plan is next revised, that direction regarding access into the Park, and into the area surrounding the Park boundary should be carefully considered.

Water Crossing Review Protocol

Over the course of the audit, Company staff expressed frustration related to implementation of the recently developed Water Crossing Review Protocol[10]. The Protocol was developed in response to Condition 25(b) of the 2003 review of the implementation of the Terms and Conditions of the 1994 Timber Class EA, referred to as the Declaration Order[11]. The Condition required that "*To assist in approving annual work schedules, MNR, in consultation with the Forest Industry and other government agencies, shall develop a proposal for efficiently conducting reviews of water crossings, as required under the federal Fisheries Act.*"

The intent of the Protocol is to ensure that fish habitat is appropriately considered during the planning and construction of water crossings. Key components of the Protocol are related to identifying and minimizing the risk that water crossings will result in damage to fish habitat. In order to provide adequate lead time for the assessment of proposed water crossings and the identification and amelioration/management of medium- and high-risk crossings, the Protocol and the 2004 FMPM require that the planning of water crossings for two years in advance must be provided in annual work schedules. Regional MNR staff noted that adequate time must be provided for biologists to review and undertake risk evaluations so that certainty can be provided that the requirements of the Fisheries Act are being accommodated.

Company staff contend that providing two years lead time is an unrealistic requirement given the reactionary nature of much of their harvest planning. The Audit Team agrees that the nature of the landbase, especially the interspersed nature of Crown and private land on the Forest, can cause access routes to shift with little notice. The Audit Team also notes that there is a substantial cost associated with this work that is distributed over a relatively small harvest volume. In addition, Westwind does not have the same degree of management control as other SFLs, and the shareholders determine where and when they wish to harvest, subject to the FMP. These aspects over which Westwind has no control create a situation where circumstances may shift often without the benefit of the amount of time required to meet the Protocol's planning requirements. Accordingly, it is understandable that Company staff do not want to invest so much time and effort planning for crossings that are likely to change at the last minute or may not even be installed.

The Audit Team notes that the Protocol has only been implemented for two years so far (i.e. for the development of 2005 AWSs and 2006 AWSs). MNR Provincial staff informed the Audit Team that they are planning to undertake a monitoring effort to examine the efficiency of the protocol and its effectiveness in avoiding damage to fish habitat. The monitoring is to include a survey of the concerns and experiences of MNR and SFL staff related to use of the protocol. Based on that review, the MNR may consider revisions. The survey is to be undertaken in 2007. Given the MNR's intended direction, and the fact that the implementation of the protocol has only been in place for two years, the Audit Team does not believe its intervention, by way of a recommendation or suggestion, is warranted.

[10] Ontario Ministry of Natural Resources. 2005. Protocol for the Review of Water Crossings Proposed Through the Forest Management Planning Process.

[11] Declaration Order regarding MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario, approved by Order in Council 1389/03 on June 25, 2003

Roads and Water Crossings Initiative

In response to a broadly recognized need that a system is needed to manage the access road infrastructure in Ontario's Crown forests, and to identify maintenance responsibilities, the MNR led the development of the Forest Roads and Water Crossings Initiative[12] (FRWI). The task team leading the initiative produced a report that is very thoughtful and presents a series of mechanisms to resolve ownership and maintenance responsibilities. It is the MNR's hope that it will be able to work out Memoranda of Agreement (MOAs) on some roads with user groups (e.g. snowmobile clubs, cottagers associations), so that the users will assume responsibility for maintaining the road and its water crossings. However, the MNR recognizes that it will likely retain responsibility for most of the roads in the Forest. Given that there are hundreds, if not thousands of water crossings on the Forest, their management is a daunting task. MNR District staff are faced with the task of managing crossings based on risk. Crossings with a priority for management will be those which have the potential to become hazards for fish habitat or safety liabilities. Because the capital costs of replacing all such crossings are beyond the means of the agency, many crossings (primarily culverts) will likely be removed. However, the removal of a culvert (or a bridge in some circumstances) will not necessarily lead to closure of the road. This odd situation arises out of the recognition that All Terrain Vehicle (ATV) enthusiasts will likely continue to travel on roads even after water crossings have been removed, and even if they were officially closed. In cases such as these, roads will be posted, and the site of the former crossings may be groomed so that vehicle passage remains possible (e.g. fords may be constructed). However in some circumstances, as has been seen, ATV travel through creeks results in damage to water quality through increasing erosion and siltation. So, through its efforts to manage risk, and be practical in its spending, MNR may run the danger of facilitating the development of circumstances which could lead to the impairment of water quality.

MNR District staff note that they have received little training or direction from MNR Regional office or Forest Management Branch on how to make such risk management decisions and how to prioritize their efforts. The FWRI program to date has focused on identifying appropriate allocation of management responsibility rather than implementation of management given various use scenarios. In response to a condition related to management of water crossings of the 1994 Timber Management Class EA, the MNR produced a technical document on the removal of water crossings on abandoned roads.[13] Although the document identifies the issues to take into account when considering removing water crossings, the document does not really provide the sort of prioritization/risk management assistance that would be of use in the circumstances in which the local MNR finds itself.

Recommendation # 13

That Corporate and/or Regional MNR provide direction to MNR District staff regarding the prioritization and implementation of road and crossing management efforts related to implementation of the Forest Roads and Water Crossings Initiative.

[12] Forest Roads and Water Crossings Task Team. 2003. Forest Roads and Water Crossings Initiative Task Team Report. Ontario Ministry of Natural Resources.

[13] Ontario Ministry of Natural Resources. 1997. Criteria for the Removal of Water Crossings on Abandoned Roads. Unpublished Report.

Wildlife Habitat

As with all plans written under the direction of the 1996 FMPM, the 2004 FMP provides projections of the amount of habitat for key wildlife species predicted to be available under the management regime selected for implementation. These projections are provided in the plan primarily in Tables FMP-5 and FMP-12. MNR provides guidance to planning teams regarding the threshold amounts of habitat which are to be maintained. MNR's direction is that the minimum amount to be maintained for each species must not fall below an amount which is less than 20% below the minimum recorded at any time during the SFMM benchmark run[14]. So, for example, say that in the SFMM 100-year benchmark run, the area of habitat for species X reaches a minimum of 1,000 ha; it is then deemed sustainable if there is a minimum of 800 ha of habitat (20% less than 1,000). (Habitat levels are sometimes permitted to cross below the –20% level for brief periods of time prior to the DFFC, without concerns regarding sustainability being raised.) Independent Forest Audits for other SFLs have raised concerns regarding this direction, expressing concern that it allows for marked declines in wildlife habitat. While the same concern may apply here in theory, very few of the habitat levels are projected to decline precipitously, and so no recommendation regarding MNR's direction is provided here.

More striking however, is the issue of whether the habitat projections are really meaningful. Given that the recent harvests on the Forest have been less than 50% of the area planned (see Section 3.4.2), and that preliminary indications from the 2004 planning term are for continuing underharvests, it is highly likely that the actual amount of wildlife habitat maintained on the forest for some of the indicator species may bear little resemblance to the projections of the FMP. While the modeling may serve to show that the projected activities are sustainable (from a wildlife habitat perspective), it does not provide a basis for more informed discussions about the habitat levels or wildlife populations likely to be present on the forest. This limitation lends support for Recommendation # 8, which is to develop a more realistic harvest forecast.

Natural Disturbance Pattern Emulation Guidelines

The application of the Natural Disturbance Pattern Emulation Guidelines (NDPEG) proved to be troublesome for the Company in a number of ways. The document is primarily written based on a boreal forest context, however direction in the guide requires that it be applied to the Great Lakes-St. Lawrence forest too. One example which illustrates this conundrum is the guide's direction that stand-level residual requirements apply at the time of the final harvest of the shelterwood silvicultural system. These requirements call for the retention of 25 well-spaced trees/ha. In the shelterwood system, prior to final removal, the density of trees may not be too much more than the density required for retention. On the site inspection portion of the audit, the Audit Team viewed one area (Stop TE-2, block UnaBru1) which had been managed under the shelterwood system and contained about 30-35 large residual white pine trees/ha, and a regenerating forest approximately 6 m high. Therefore if the direction of the NDPEG were to be followed, the harvest of most of the residual crop trees would be foregone. Management of the site over the previous decades was to culminate with the harvest of these prime-quality trees in a manner consistent with the shelterwood system. It seems

[14] The benchmark run is run to identify the state of the forest in the absence of fire suppression and timber management. For the Spanish Forest, the model was benchmark run simulated the forest condition for 100 years.

incongruous therefore to require that most of these trees be left standing.

The Audit Team notes that the MNR expects to release a new landscape level guide in time for use for the preparation of the 2010 plans. That guide will replace the NDPEG and, according to MNR staff, will contain landscape level direction more suited to Great Lakes-St. Lawrence Silviculture. Unfortunately the release of the landscape guide will be too late for use in the development of the 2009 FMP for the French-Severn Forest. Especially because the 2009 FMP will be a ten-year plan, the Audit Team believes that it should not be encumbered by the inappropriate direction of the NDPEG as has proved troublesome in the present plan.

Recommendation # 14

That the planning team for the 2009 FMP, with the assistance of Corporate MNR and MNR Region, should develop local interpretations of the requirements of the Natural Disturbance Pattern Emulation Guide, suitable for use in the Great Lakes-St. Lawrence silviculture practiced on the Forest.

3.3.8 Plan Review and Approval

Timelines in the original TOR were in accordance with FMPM requirements. Comparison of target dates in the TOR with actual milestone achievements reveals that timelines were generally met. A delay of approximately 1 month in holding the First Information Centre translated into similar delays with the Second Information Centre and submission of the draft plan. Reasons for the delay in holding the First Information Centre included the need to "complete tasks" and avoid the first two weeks of moose hunting season.

Review of the certification page for the 2004 FMP reveals that many plan reviewers were also plan advisors and planning team members. Of the 28 plan reviewers listed, 8 were original planning team members while 18 were MNR Region and Head Office advisors. Of the latter group, only 11 were listed in the original TOR, suggesting some level of turnover with Regional and Provincial advisors. Generally, planning team members felt that plan reviewers and advisors were helpful and supportive, and that their familiarity with the FMP through their role on the planning team resulted in a more effective review. This view appears to be supported by the relatively low number of required alterations resulting from the review.

The Final List of Required Alterations contained only 430 alterations and was provided to the Company on November 3, 2003. This number of alterations was actually quite low in comparison to FMPs for other Forests. A covering page dated November 28 (with an RPF seal but without a certification statement) belatedly met the FMPM requirement that required alterations related to the manipulation of forest cover be certified by an RPF.

Interviews with MNR staff indicated that required alterations were, for the most part, reasonable and well incorporated into the plan. The required alterations were addressed within the allocated time frame and the plan was ultimately delivered on schedule. Finally, review of the FMP approval page revealed that it contained the appropriate certification and approvals, including the required signatures and seals.

3.3.9 Plan Amendments

Amendment summaries for the 1999 and 2004 French-Severn FMPs indicate that there were 95 FMP amendments during the term of the audit (April 1, 2001 to March 31, 2006). Eighty-eight were classified as administrative and seven as minor.

Of these amendments, 48 occurred during the period of the 2004 FMP, in the final two years of the audit term (April 1, 2004 to March 31, 2006). At first glance, the frequency of amendments appears excessive; however, 14 of 48 were required to correct values information and were entirely unavoidable by the Company. In addition, 4 were required to change FMP text and supplementary documentation and 2 were not approved. Of the remaining 28 amendments, 20 were required to adjust harvest allocations, 3 to enable salvage harvest, 4 for changes to roads and water crossings and 1 for silviculture. Considering the difficulty scheduling and planning multiple-licensee harvest operations, it is not surprising that the majority of amendments were related to harvest planning.

FMP amendment requests categorized by the MNR District Manager (DM) after the effective date of the 2004 FMPM must be prepared in accordance with Part C, section 2.0 of the 2004 FMPM. New requirements were intended to reduce the burden and delays associated with preparing amendments for relatively insignificant changes. Examples of changes for which amendments are generally no longer required include: removal of features or values that no longer exist, AOC prescription changes, changes to crossing locations or conditions, unmapped and/or incorrectly mapped streams and/or mapped features and values. These requirements appear to have been implemented in accordance with the manual starting in September 2004. From this point onward, the new certification page format was used and amendments for values corrections were no longer necessary or submitted. Thus, all amendment proposals were consistent with FMPM requirements.

SFL hard copy records for amendments from 2001-2004 were incomplete. However, the Audit Team was assured that they existed digitally. Of those amendments for which hard copies were available, the amendment proposal documentation was sufficiently detailed and informative. However, original seals and signatures were lacking.

In contrast, hard copy records existed for all 48 amendments from 2004-2006. As above, amendment proposals contained sufficient detail except for some of the MNR initiated values updates which did not always include maps. Company amendment proposals were particularly informative and well formatted, with maps and photographs often embedded within the text of the amendment proposal document. Again however, original signatures and seals were lacking on SFL hard copies. New 2004 FMPM amendment requirements appear to have been implemented with the preparation and submission of amendments starting in September 2004. From this point onward, the new certification page format was used and amendments for values corrections were no longer submitted. However, original signatures and seals were still entirely lacking.

Although the problem with missing amendment documentation appears to have been solved with the implementation of the 2004 FMP, the problem with the lack of original signatures and seals has not. It is a 2004 FMPM requirement that "All amendments will be certified by the plan author and the MNR District Manager, and when approved, will be filed in the same locations as the approved forest management plan". It is therefore reasonable that copies of signed and sealed certification pages should be retained at

both the MNR and Company offices. Although this requirement may be belatedly fulfilled through MNR's annual provision of copies of administrative amendments (signed and sealed) to the SFL at year end, it would still appear that the intent of the FMPM is to ensure that approved copies of amendments reside at both locations. Therefore, the Audit Team provides the following recommendation:

Recommendation # 15

That the Company institute measures to ensure that signed and sealed copies of approved FMP amendments and AWS revisions are filed in its office promptly following their approval.

Although SFL amendment summaries existed for both the 1999 and 2004 planning terms, neither was particularly useful since they lacked submission and approval dates and provided insufficient description of the reasons for the amendments. Nor did they indicate which amendments had associated AWS revisions. In this way the amendment summaries fail to meet the minimum requirements stipulated in the FMPM.

Recommendation # 16

That the Company update its FMP amendment summary to include request and approval dates and better descriptions of the reasons for amendments.

In contrast, separately maintained MNR ledgers contained submission and approval dates and better descriptions of the reasons for amendments. Of particular interest, amendment tracking sheets were designed for easy calculation of the number of working days to process amendments. This information was transferred to 2003-04 summaries.

Complete copies of all amendment submissions were found at the MNR Bracebridge Office. These were well-organized in binders. Each amendment from 2001-2004 was signed by the District Manager in accordance with the 1996 FMPM. In addition, the MNR RPF signed and sealed all amendments as the plan author of the 1999-2004 FMP. Requisite opportunities for public inspection of minor amendments were also provided.

Similarly, all administrative and minor amendments for 2004-2006 were signed by the District Manager in accordance with the 2004 FMPM, even though the 2004 FMPM also allows the Area Manager to sign administrative amendments. Although most amendments were approved in a timely manner, interviews revealed that approval was sometimes delayed due to the occasional absence of the District Manager. As a result, the Audit Team suggests that the MNR District Manager consider delegating the authority to sign administrative amendments to the Area Supervisor, at least in his/her absence.

Suggestion # 5

The MNR District Manager should consider delegating the authority to sign administrative amendments and AWS revisions to the Area Supervisor.

Finally, the FMPM requires that MNR distribute copies of amendments to various locations specified within the FMPM (e.g., MNR Region, MNR Forest Management Branch, Ontario Ministry of the Environment and Energy (MOEE) Regional Office and a

location in Toronto provided by MNR). Staff indicated they regularly forwarded amendments to all of the required locations. This was substantiated through the examination of records and both the MNR and SFL office.

3.3.10 Contingency Plans

The two-month MNR OPSEU strike in the spring of 2002 resulted in the delay of the First Information Centre. However, this occurred early enough in the planning process that the planning team was able to make up for lost time and did not need to consider the production of a contingency FMP. Ultimately, the plan was approved on January 28, 2004, only 13 days later than the originally scheduled date of January 15, 2004.

3.3.11 Annual Work Schedules

Annual Work Schedules produced between 2001 and 2005 were written in accordance with the requirements of the 1996 FMPM. They contained the requisite components and were consistent with both the 1999 FMP (2001 to 2003) and 2004 FMP (2004 to 2005). Two were approved by MNR prior to April 1 while the others were approved during the month of April. Approval pages contain the required Company and MNR signatures.

In the 2004-2005 AWS, the scheduled depletion area of 15,890 ha was reasonable compared to the 2004 FMP average planned harvest of 8,599 ha (185%).

For the 2005-2006 AWS, the scheduled depletion area of 15,567 ha also compared favourably to the 2004 FMP (181% of 8,599 ha). Rationale for this level of harvest was provided in the text and included the flexibility to adjust to variable market conditions, and/or winter logging conditions and deal with uncertainties encountered during FMP implementation. Of note, Table AWS-2 provided a detailed breakdown of planned harvest volumes for each of the many licensees while the AWS also contained a comprehensive set of special operating procedures for the French-Severn Forest.

However, the 2005-2006 AWS was also the first to be written under the requirements of the 2004 FMPM. Although it substantially met these requirements, it did suffer from some minor transitional shortcomings. For example, the text did not explicitly describe how stand-level residual requirements were to be addressed during the implementation of harvesting operations as required by the 2004 FMPM. The audit team anticipates that such a description will be included in the next AWS.

In addition, the listing of roads and associated use management strategies in Table AWS-4 was limited to primary and branch roads and did not include information for operational roads, as is required by the 2004 FMPM. However, this would have been extremely difficult without a completed roads inventory. Since the 2004 FMP was written under the previous FMPM and did not contain an inventory of operational roads, it is reasonable that Table AWS-4 should be lacking such detail. Notwithstanding, the District roads inventory has just been completed in preparation for the next FMP, therefore it should be possible to fulfil this requirement for the 2007-2008 AWS.

With respect to requirements for water crossing planning and review, Table AWS-5 listed culverts and bridges to be installed or repaired but did not identify those to be removed or maintained. In spite of the lack of specific direction or training provided to meet this requirement, the listing was actually very comprehensive with dozens of crossings listed.

It should also be noted that the 2006-07 AWS, although technically outside the scope of the audit, did contain information for proposed culvert and bridge removals.

Ultimately, however, the Company found that it was very difficult to provide the locations and information for two years worth of crossings due to rapidly changing markets and operational priorities for so many individual licensees. In addition, seasonal constraints, difficulties in obtaining private land access, the high frequency of unmapped streams encountered during operations, the inability to plan skid-trail locations two years in advance and the large investment of time and resources required to field check crossing locations and provide the required construction details were other factors making it difficult if not impossible to fully meet these requirements with AWS submission. (This topic is also discussed in Section 3.3.7.) Consequently, revisions were necessary throughout the year to provide this information as it became available.

AWS Revision Summaries for the 1999 and 2004 French-Severn FMPs indicate that there were 144 AWS revisions during the term of the audit from April 1, 2001 to March 31, 2006. Averaging 29 revisions annually, the frequency of revisions showed a decreasing trend from 39 revisions in 2001-2002 to 21 revisions in 2005-06. At the time of the field audit, there were only 13 revisions for 2006-2007.

Of the144 AWS revisions, 49 occurred during the 2004 FMP period, in the final two years of the audit term (April 1, 2004 to March 31, 2006). Documentation was available for most of these, although 2005-2006 revisions 19, 20 and 21 were missing from the binder. Revision proposals were extremely detailed and informative. They were well formatted with maps and photographs often embedded within the text of the revision document.

For the most part, the content of these revisions reflected new 2004 FMPM information and planning requirements for water crossings and aggregate pits. These requirements were gradually implemented starting in September of 2004. Of the 49 revisions, 18 were required to provide water crossing location and construction details and 6 to identify aggregate pit locations to meet these new requirements. Of the remaining 25 revisions, 11 were required for changes to harvest areas, 7 for new or changing road locations or road maintenance, 2 for silviculture, 2 to permit access within AOCs, 1 for salvage harvest, and 2 were not approved. Thus, the frequency of revisions appears reasonable given the complexity of tenure and operations on the forest, and the additional FMPM requirements for water crossings and aggregate pits.

Also, from this point onwards, the new certification page format was used. Revisions were certified by the Company RPF with signature and seal evident on the original documents and MNR approval signatures present in most cases. In 2005, however, certification and approval seals/signatures were entirely lacking from SFL-holder copies. This deficiency continues to present and is addressed through Recommendation # 15.

In contrast, signed and sealed copies of all revisions were available at the MNR office in Bracebridge. These were well-organized in binders. Revision summaries were up-to-date and documentation was well-maintained.

All AWS revisions for 2004-2006 were signed by the District Manager in accordance with the 2004 FMPM, even though the 2004 FMPM also allows the Area Manager to sign AWS revisions. Although most revisions were approved in a timely manner, interviews

revealed that approval of some were delayed when the District Manager was absent. As a result, the Audit Team suggests that the MNR District Manager consider delegating the authority to sign AWS revisions to the Area Supervisor, at least in his/her absence. This is addressed through Suggestion # 5.

Company Annual Compliance Schedules are discussed in Section 3.6.1 *General Monitoring* Compliance Planning.

3.4 Plan Implementation

3.4.1 Areas of Concern

The majority of the AOCs inspected by the Audit Team were well implemented. The Audit Team did view one stick nest AOC for which a trespass had occurred. We were informed by the Company and MNR that in this past year, outside of the official audit time period, a serious trespass of a red-shouldered hawk AOC had occurred. The situation arose from a lack of communication between Company staff and overlapping licensees. This has led to recognition of the need to better clarify direction regarding the timing of release (i.e. approval for operations), particularly around sensitive sites. The Audit Team understands that a process is in place to address this, and so does not make a recommendation here.

3.4.2 Harvest

The Audit Team found that the quality of the harvest operations was very high, with good utilization and negligible damage to residual trees or sites. Snag retention was also good.

The Company and MNR had a difficult time dealing with one new small operator, which developed internal conflicts between the partners. The Company and MNR initially encouraged the new operator, and provided advice to improve their operation. However, once the partnership issues developed, the operation suffered and Westwind and MNR combined to limit issues that developed as a result of poor practices and failure to haul harvested wood. This is an example of the benefits of the good cooperative relationship between the Company and MNR, where the two organizations were able to reach agreement and coordinate their responses to the situation that developed.

Planned versus Actual Levels of Harvest Operations

As has been described above, the actual harvest level has fallen well short of the planned level during the audit period. This continues the trend from previous periods. In the 1999 FMP period, the planned harvest area was 45,906 ha, as presented in the FMP. The actual harvest area during the period was 17,670 ha, or 38% of planned. There were a number of FMP amendments that modified the area allocated for harvest during the period, but they did not have an appreciable impact on the overall planned level, as areas were subtracted as well as added. Table 4 shows the planned and actual harvest during the 1999 FMP period for the major forest units.

Of the major forest units, the greatest percentage shortfall occurred in the Georgian Bay selection tolerant hardwoods, which are on average lower in quality than the Bracebridge tolerant hardwoods. Harvesting in the intolerant hardwoods was also low, but increased substantially from the previous plan period (when the actual was 9% of

planned) due to the growing market for poplar and white birch in Ontario. White pine and shelterwood tolerant hardwoods saw the greatest percentage utilization, on an area basis.

Table 4. Planned versus Actual Harvest Area (ha/5 yr period) in 1999 FMP.

Forest Unit	Planned	Actual	% Achieved
HDSBB	20129	9300	46
HDSGB	9951	940	9
HDUS	2557	1839	72
PWUS	7939	4435	56
INT	1378	352	26
OTHER	3952	804	20
SUM	45906	17670	38

(Source: Planned from 1999 FMP, actual from forest managers report.)

Planned harvest volumes were also underachieved, but to a somewhat lesser extent than the area. This same relationship also occurred during the 1994-99 plan period. Table 5 shows the planned and actual harvest volumes for the major species and species groups in the 1999 FMP period. These results suggest that the yield curves used to estimate harvest volume were generally accurate, and that operators were efficient in utilizing merchantable material, as one would expect given the present poor economics of harvesting many stands.

Table 5. Planned versus Actual Harvest Volume (M m3/5 yr period) in 1999 FMP.

Forest Unit	Planned	Actual	% Achieved
Tol hardwoods	799	372	47
Poplar & birch	157	56	36
White Pine	272	185	68
Other conifer	184	81	44
SUM	1412	694	49

(Source: Planned from 1999 FMP, actual from forest managers report.)

The Audit Team has expressed concern regarding the persistently low levels of harvesting, on an actual versus planned basis, in section 3.3.6, and issued Recommendation # 8 to address this concern. The Audit Team notes that the previous IFA registered the same concern and issued a recommendation to assess how the use of historical harvest levels, versus allowable levels, would affect forest development. This analysis was undertaken, with a harvest at historical levels simulated for the first twenty years, after which it reverted to the allowable level. The outcome was found to be sustainable. This analysis was somewhat insightful, but two periods of harvesting at historical levels should not have much effect on the future development of the forest over a long time frame.

To date, the level of harvesting in the 2004 FMP is somewhat higher than it was during the 1999 FMP period, but it is still only 52%, based on the planned average annual harvest area. This assessment is based on results for the first two years of the 2004 FMP period (the data for 2005/06 are preliminary at the time of writing). Harvest volume data are only available for 2004/05, and show that for that year, volume was running at

about 50 % of expectations, consistent with the results from previous years. In short, although the harvest level is closer to planned so far this plan period, it is still well short of planned and does not change the Audit Team's view that planned harvest levels should be aligned more closely with historical levels.

3.4.3 Renewal

A wide range of renewal activities was sampled on a variety of site types on the French-Severn Forest. Particularly notable were group openings that successfully regenerated to mid-tolerant hardwoods such as Red Oak and Black Cherry (See Figure 6), and successful (early stage) plantations of Eastern Hemlock. Also common were White Pine sites with some large-crowned white pine separated by large openings with very shallow soil or exposed bedrock and very rich silty soils between the bedrock patches, heavy with hardwood competition. (See Figure 5.)

Successful establishment of desirable regeneration is not a problem in the hardwood stands. In conifer Forest Units few stands have been declared successfully regenerated. White Pine shelterwood stands are not simple to regenerate successfully. One conifer stand viewed by the Audit Team was declared free-to-grow (FTG). It was a jack pine clearcut.

The Year 10 Annual Report clearly defines reasons that white pine regeneration has been lacking on the French-Severn forest. A condensed version of the list follows:

1. White pine only regenerates and competes unaided on the very shallow sites.
2. Due to site conditions, regeneration on white pine sites is seldom of high stocking.
3. Past harvest areas had little or no follow-up silviculture activity for various reasons.
4. Timing of tending activity is dependant upon severity of site preparation activity.
5. Young seedlings are at great risk if chemical site preparation is not used.
6. Residual stocking affects regeneration level.
7. Failure to harvest competitive hardwoods leads to poor light conditions for regeneration.
8. Even where regeneration is successful, release from understory competition and, later, from the residual overstory, is critical.

The Audit team feels that creative thinking as discussed previously under Operational Planning is necessary to handle the competition problems present on the French-Severn Forest.

.

Figure 5. Example of rocky white pine site near Georgian Bay.

Figure 6. Example of group selection opening in tolerant hardwoods.

Figure 7. Successful white pine renewal under shelterwood.

Figure 8. A white pine shelterwood site in need of tending.

Significant levels of renewal and tending work have been carried out and the results, both successes and failures, were viewed during the audit. Westwind and MNR staff are to be commended for their high level of co-operation and enthusiasm shown for both successes and problem areas in silviculture on the French-Severn Forest.

No prescribed burns were carried out during the term of the audit. The Company indicated that one of the obstacles to this was the high cost charged by MNR, which recovers its costs from the organization applying to undertake the burn. MNR practices full cost recovery for prescribed burns, because SFL holders usually make use of MNR Fire staff as the licensees do not have expertise available for planning and implementing a burn. The MNR defines full cost as including both the direct and indirect costs. Direct costs are explicitly related to the conduct of the burn – for example, the wages of the mixing crew or the cost of helicopter time during the burn. Indirect costs include regular fire crew salary, which is paid regardless of whether the burn is undertaken.

The Audit Team is primarily concerned that the indirect costs are levied on burns undertaken for silvicultural purposes. The costs of MNR staff time used to plan the burn, and fire crew time, would ordinarily be paid by MNR in the absence of the burn since these staff are on payroll. In addition, MNR also charges an overhead cost, applied as a percentage, for administration, communications, and maintenance of infrastructure assets. While high costs are not the only disincentive to the use of prescribed burns, they are a major factor, based on discussions that the Audit Team has had with various forest managers. Prescribed burning is very well-suited for achieving silvicultural objectives on some sites, such as thin-soiled ones where site preparation is desirable but mechanical site preparation is likely to damage the site. The Audit Team feels that some of the costs in the costing formula are unfair (e.g. the cost of MNR staff time that is not affected by whether the burn is conducted) while others could be reduced in the interests of encouraging additional prescribed burn activity (e.g. overhead). Accordingly, the following recommendation is provided:

Recommendation # 17

That Corporate MNR review the prescribed burn cost formula with the intent of increasing the fairness of the formula by reducing some of the charges and facilitating greater use of prescribed burning for silvicultural purposes.

Renewal Funding

The above-mentioned issues of low volumes, low quality, and low prices for forest products have provided Westwind with a difficult challenge. Maintaining a reasonable harvest level in key forest units, implementing the appropriate silvicultural prescriptions, treating backlog[15] that dates from the time when MNR managed the forest, and meeting associated financing requirements has been a difficult balancing act.

Due to their harvest history, most stands managed under partial harvest systems in the French-Severn Forest have a high proportion of low quality stems and benefit when stand improvement work is performed. In the selection stands, this entails removing

[15] On the Westwind Forest, most of the backlog consists of failed white pine regeneration under shelterwood management. A very approximate estimate of the area of backlog is 8,000 – 14,000 ha, however much of this would be verified on the ground before any treatments were contemplated.

additional low quality and undesirable stems that may not otherwise be utilized. In the pine shelterwood stands, stand improvement work usually consists of removing cull poplar, birch, and pole sized maple and other undesirable trees. Stand improvement is often done in conjunction with a normal harvest entry. On the French-Severn Forest, the Company pays to have stand improvement work conducted on the majority of the harvest area in the pine and tolerant hardwood forest units. Table 6 shows the harvest area in the white and red pine, tolerant hardwoods, and other forest units. During the period covered by the IFA, the area of tolerant hardwoods harvested was 70% of the total, and white pine constituted 26%. The other forest units made up the remaining 4% of harvest area. Of the tolerant hardwood harvest area, 84% of the harvest was undertaken via the selection system.

Table 6 also shows the area treated with stand improvement funds. It can be seen that most of the partial harvesting done on the French-Severn Forest (which is 92% of harvesting by area) is associated with a stand improvement treatment. The areas given stand improvement are not all reported in the Annual Renewal, Tending and Protection Operations Table in the Annual Reports, as per MNR direction. For example, in 2004/05, Westwind staff reported that the Company benefited from Forestry Futures funding to undertake 2,917 ha of stand improvement in selection system forest units (FUs), 468 ha in mixedwood shelterwood (mainly in hardwoods) and 1,166 ha in pine shelterwood.

Table 6. Areas harvested by Forest Units Grouped by Species, and Stand Improvement Area.

Forest Unit	2001-02	2002-03	2003-04	2004-05	2005-06	Average	%
Tol Hwd	1965	3504	2622	3456	2920	2893	70
Pine	599	1232	1081	1572	964	1090	26
Other	53	499	116	3	163	167	4
Sum	2617	5235	3819	5031	4047	4150	
Stand Improv	2630	4226	3855	4551	3731	3799	

Westwind has been very successful in gaining Forestry Futures funding, with recent amounts being in the order of $450,000/year. About half of this, on average, is used to support stand improvement work. Another portion of the Futures funding is used to undertake work on backlog sites. Most of this involves ensuring the establishment of pine renewal under old shelterwood harvests, and this could entail anything from release of suppressed regeneration to site prep and planting. The terms of Forestry Futures grants require Westwind to fund 20% of project costs; operators generally receive a payment of $70/ha for stand improvement work in selection stands, of which roughly $56/ha is paid from Forestry Futures. Westwind staff estimate that there is also additional management time and overhead involved.

It is anticipated by the Audit Team that the recent jack pine budworm outbreak in the province will attract a substantial portion of the available Forestry Futures Trust funds for the next couple of years, depriving Westwind of a key source of funding. Without Forestry Futures funding, little if any backlog would be treated and a great deal less stand improvement work would be undertaken. However, for backlog pine shelterwood stands, not treating them at all could result in a contravention of the provincial policy

requirement to maintain pine on the landscape and to keep these stands in production within the shelterwood system (forest regulation). Should the amount of funding available for stand improvement decline, it is likely that there will be a decline in the harvesting of marginal blocks, especially in the tolerant hardwoods, and silvicultural objectives will be severely jeopardized.

Since this situation arose due to the larger than expected area of backlog, and because Westwind is only able to work on the backlog as funds become available, the Audit Team feels that the situation is less than fair to the Company and detrimental to sound management of the forest. Accordingly, the Audit Team recommends:

Recommendation # 18

That MNR and the Company evaluate the extent of remaining backlog, and its treatment requirements, and negotiate a payment from MNR that would enable the Company to fully treat the additional backlog on the Forest.

Timber harvests generate funds that flow into the Forest Renewal Trust (FRT), which is the source of funding to silviculturally treat areas of ongoing harvest. The renewal rates throughout the majority of the audit period have been $\$11.00/m^3$ for grade 1 pine, $\$1.50/m^3$ for grade 2 pine[16], and $\$8.00/m^3$ for grade 1 tolerant hardwood. Exceptions include 2002-03, when the rate was lowered to $\$9.95/m^3$ for grade 1 pine and $\$6.95/m^3$ for grade 1 tolerant hardwoods. The renewal rate for grade 2 tolerant hardwoods increased from $\$0.50/m^3$ during the first three years to $\$1.00/m^3$ in 2004/05 and remained there in 2005/06 (while this increase is positive, it is less so considering that all pine provided $\$11/m^3$ prior to the separation of Grade 1 and 2 pine in 1999). The amount of revenue from each key part of the harvest in each year of the review period (except 2005/06, for which data were unavailable) is shown in Table 7.

During the audit period, grade 1 pine consistently made up 65% of the total white & red pine volume, while grade 1 tolerant hardwood log made up 32% of the total tolerant hardwood harvest volume. The remaining proportions of the harvest were grade 2 material.

Table 7. Funds Provided to the Forest Renewal Trust by Species Group ($).

Forest Unit	2001-02	2002-03	2003-04	2004-05	Average	%
Tol Hwd	150,065	272,964	240,331	359,642	255,750	35
Pine	218,829	582,701	352,920	632,840	446,822	61
Other	16,720	47,720	27,154	20,869	28,115	4
Sum	385,614	903,385	620,405	1,013,351	730,688	

These results show that while the harvest area of tolerant hardwoods makes up 70% of the total harvest area, tolerant hardwoods account for 35% of the total FRT income

[16] Prior to 1999, there was no grade distinction in pine and all cubic metres provided $11/ha to the Renewal Trust. When the pine was sub-divided by grade, it was estimated that 10% of the material would be Grade 2, but the actual proportion has turned out to be larger. The net result of this change has been a reduction in Trust revenues on the order of $150,000/yr.

generated by harvesting. On the other hand, pine volumes generate 61% of funds that flow into the renewal trust, while only 26% of the harvest area is in the pine forest units.

The annual reports do not provide enough information to reveal how much silvicultural funding is spent on various forest units. Westwind estimated that, on an average hectare, the cost of activities and overhead associated with selection harvesting in tolerant hardwoods exceeded the revenue provided to the renewal trust fund by 70%, which equates to a total differential of approximately $90,000 per year.

The average annual expenditure on site prep, planting and tending, as listed in Table AR-11, is roughly $365,000. Most of this would accrue to pine management, but it also includes the FRT portion of tolerant hardwood stand improvement projects. The average of other costs is roughly $800,000; subtracting the costs estimated to be associated with tolerant hardwoods leaves roughly $500,000 + $365,000 attributable to the management of pine. This exceeds the average annual contribution of pine to the Renewal Trust Fund by roughly $425,000 per year.

There was a concern raised that the tolerant hardwood harvesting has supported pine renewal, but the Audit Team's analysis of the situation does not support this contention. One of the main concerns that the Audit Team has with this perspective is the implicit assumption that each species should always pay it own way. In fact, over the next two plan terms, as the balance of pine harvests shifts from seed cuts to removal harvests, spending on pine renewal will decline and become less than the Renewal Trust contributions from pine. In any case, the question is moot because the Crown Forest Sustainability Act requires the Company to manage the entire forest to ensure its long term health and vigour, as well as the conservation of biological diversity. This requires undertaking necessary steps to regenerate species that are harvested, and is entirely appropriate. There is also provincial policy direction to restore pine where current abundance is well below historic levels, as is the case in Westwind.

The results of the analysis of FRT revenue and expenditures suggest that there is insufficient funding to support the renewal and tending program required on the French-Severn Forest. This is further supported by a review of the AR-11 tables, which show an average annual deficit of $426,000 in the Forest Renewal Trust Fund. During the audit period, this has been covered in part by investment returns earned on the balance in the account, and by a drawdown of the funds in the account above the minimum required balance. The decision to reduce the excess was made by the Westwind Board.

However, at this time, the buffer in the Trust fund has been largely eliminated and the reduction in the buffer has also contributed to a reduction in investment earnings, which declined during the audit period from more than $200,000 in 2001 to $60,000 in 2004.

Going forward, the major issue facing Westwind is the shortage of funding to support forest renewal associated with on-going harvest operations. (This is largely separate from the question regarding the availability of Forestry Futures Trust funds.) The Company has no attractive options for solving this situation. Overlapping licence holders were reported to be very resistant to increases in renewal rates, given the very depressed state of the forest industry, and increases might stimulate operators to increase their harvesting in other management units that have lower renewal rates.

Figure 9. Example of a by-passed poor quality tolerant hardwood stand.

Stewardship Inc.
Felling Unmerchantable Material During the Seeding Cut Stage of Uniform Shelterwood Stands -
Project No. 343-1-R10
Unmerchantable stems were felled during the seeding cut of stands managed under the uniform shelterwood system to promote white pine, red oak, and yellow birch growth for sawlog and veneer production.
French Severn Management Unit.
Area Treated: 1436 ha Year: 1999-02
FUNDED BY
FORESTRY FUTURES
TRUST ONTARIO
12 • 9:16 AM

Figure 10. A stand improvement project funded by Forestry Futures Trust.

At this point, there have been no hard decisions made by Westwind concerning how to handle the looming deficit of silvicultural funds. The move to fewer shelterwood entries in pine and shifting some tolerant hardwood area into the shelterwood forest unit will provide some assistance, by raising contributions per hectare to the FRT and improving the economic equation for some blocks. However, other steps are probably going to be required, perhaps including an increase in the renewal rates for some products, and perhaps some of the least economically attractive stands should be left until economic conditions improve or the stands have added more volume.

Recommendation # 19

That Westwind and MNR develop a strategy to manage or alleviate anticipated shortfalls in funds available for stand improvement, silviculture and tending without sacrificing strategic direction.

It is expected that over the next 5-10 years, the annual renewal deficit will ease as pine stands begin to receive their first removal cuts. This will lower the cost/ha while the Trust revenue per ha will be as high or higher than it was at the seed cut. However, in the meantime, there is a significant annual shortfall and Westwind requires an appropriate strategy.

Compounding the problem for the Company has been a delay in payments to the FRT by one large overlapping licensee that has had a particularly difficult time. The overlapping licensee went into default of its FRT payments in the fall of 2003 and has been behind in payments ever since. The troubled overlapping licensee has owed as much as $400,000; this has since been reduced to roughly $200,000 as the licensee is making monthly payments including interest. However, the deferral in payments has meant that the Renewal Trust did not have the minimum required balance on March 31, 2005 or 2006. Due to poor industry conditions, MNR has allowed these types of arrangements, whereas the Company would have suspended the ability of the overlapping licensee to continue harvesting after the first quarterly non-payment. While MNR's approach is understandable, it has denied Westwind the opportunity to earn investment income within the Trust. Westwind estimated the loss of income at $125,000, and although interest is being paid, the Audit Team expects that the Trust will not recoup the full opportunity cost, further compromising Westwind's ability to adequately fund its silvicultural program. Since the deferral was Corporate MNR's decision, the Audit Team feels that it is only fair for MNR to mitigate the negative impact on Westwind. Options for MNR include assuming the liability for the unpaid trust amounts itself, or paying interest on the full unpaid balance directly into the trust fund.

Recommendation # 20

That Corporate MNR take appropriate measures to mitigate the negative impact of deferred payments to the Westwind Renewal Trust Fund.

3.4.4 Tending and Protection

Tending is generally required to ensure the regeneration of white (and red) pine under shelterwood management, and to enable stand conversions to pine that are associated with the 2004 FMP objective to maintain or increase the area of white and red pine on the forest, and the associated target to convert at least 40 ha off-site tolerant hardwoods

or mixed woods to white pine/white spruce/red pine. Also, as mentioned above, there is an extensive area of old white pine shelterwood harvests (backlog) with insufficient white pine regeneration. Some form of tending will be required on most of these backlog sites, either to release suppressed regeneration or to reduce competition in order to re-establish pine. The 2004 FMP states that the majority of the planned aerial herbicide application will be used to treat these backlog sites.

The 2004 FMP forecast that 2,920 ha of aerial tending would be required, with all but 20 ha worth being applied in the white pine forest units. This forecast number is similar to the area treated during the 1999 FMP period, which was 2,872 ha, almost double the planned level of 1,548 ha. In the first two years of the 2004 plan period, roughly 530 ha have been aerially sprayed. Ground chemical tending was planned to be 2,200 ha (close to the actual level of 1,872 ha completed during the 1999 FMP period and well above the 200 ha forecast in that plan), and manual tending was forecast at 180 ha during the life of the 2004 FMP. In the first two years, only 118 ha of ground spraying was accomplished and no manual tending undertaken.

In general, the planned level of tending was generally accomplished in the 1999 FMP, especially considering that the actual white pine harvest was well below planned levels. However, it appears that tending will fall short of planned levels during the 2004 FMP period, although it is perhaps too early for this to be a firm conclusion.

In the 2004 FMP, a total of 22,740 ha of selection hardwood area was forecast to be treated with stand improvement measures; this is approximately equal to the forecast selection harvest area. In addition, 455 ha of area managed under an even-aged harvest system (predominantly pine shelterwood) was forecast to be treated with stand improvement measures. Because the actual harvest in these forest units is running at about 50% of planned over the first two years of the 2004 FMP period, stand improvement is accordingly behind planned levels, although it is keeping pace with the harvest.

No measures were forecast as being required to protect the forest from pests.

3.4.5 Renewal Support

The 2004 FMP provided estimates of the amount of seed required to meet renewal requirements, and additional seed of white pine, red pine and white spruce was required. It was noted that some of the banked seed was quite old, and reduced germination rates were negatively impacting stock production. Westwind staff noted that it had been a considerable time since the previous good pine and white spruce seed years, hence the only seed collected during the 1999 FMP period was 1.5 Hl of red oak acorns. The Audit Team noted that 2006 was shaping up to be a very good seed year for almost all conifer species, and it is anticipated that the Company should be able to replenish its seed supplies if the seed does not experience undue loss to insects or other factors.

The forest has white pine and red spruce seed orchards on it but neither are mature enough to provide appreciable quantities of seed. The Conger white pine seed orchard provided 4.2 Hl of seed in 2004/05, the only year during the current plan for which seed was available.

3.4.6 Access

The Audit Team found the roads in the forest to be in modest condition, reflecting their level of use and the limitations for maintenance faced by the Company and its operators.

During our site inspections, the Audit Team found considerable evidence of the use of the Forest by All Terrain Vehicles (ATVs). ATVing is a popular recreational pastime and it is evident that they are being used for travel on existing roads and trails, as well as for going "off-road" (Figure 11). While recreational use of ATVs has a large constituency, their use has the potential to cause harm to the forest and to greatly complicate access management on the forest. Damage to sensitive sites, such as shown in Figure 11, is a growing problem not just in the French-Severn Forest, but throughout North America. Some other concerns about ATV use include increased hunting pressure and harassment of wildlife, loss of remoteness, noise, litter, and facilitating the spread of invasive exotic species. At the same time as concerns are being expressed about the unconstrained use of ATVs in the Forest, the Ministry of Tourism has a campaign to publicize ATV opportunities in Ontario. Being close to centres of population, and in a diverse forest setting, the French-Severn Forest is likely to experience higher use of ATVs than other forested parts of Ontario.

There is a limited regulatory framework available to deal with managing the use of ATVs. The Public Lands Act was not designed with this type of wide-ranging use in mind. The use of tertiary roads and other roads to access all parts of the forest means that the road use strategy discussed above will need to consider this use of roads as well. Considerable funding will be required for enforcement unless there is outreach to user groups and some form of self-compliance system through provincial or regional user groups, possibly following the model of the snowmobile clubs in Ontario.

Recommendation # 21

Corporate MNR, on a provincial scale, review its policy and legislation to ensure the wise use and management of Crown forest access roads and trails by the growing community of off-road vehicle users. In the interim, Bracebridge and Parry Sound MNR offices should work with off-road vehicle user-groups under existing policy and legislation to control and manage the use of Crown forest access roads and trails.

Water Crossings

The quality of the recently-constructed water crossings on the forest was generally good. In addition, the Audit Team inspected the sites of several recently removed water crossings. The Audit Team was impressed by the quality of work of the removals. Erosion-control measures have been used effectively, and there was no evidence of damage to the sites caused by removal activities.

Figure 11. ATV tracks through a sensitive site on the Forest.

3.5 System Support

3.5.1 Human Resources

This section of the IFA is primarily concerned with the qualifications and training of staff, contractors and others who are employees of the auditee, licensees on the forest, and other forest workers (e.g. contractors).

Staff of both the Company and MNR were qualified, well-trained and very competent. The Company is very active in ensuring that its staff have current qualifications that are refreshed periodically. Each Westwind employee has a job description and training is directed towards general courses (e.g. first aid) and more specific ones tailored to the individual's responsibilities (e.g. seed forecasting, Arcview, and plant identification). Field staff are also required to be proficient at tree marking and have annual refresher courses. A compilation of more than 33 courses that were available to at least some staff members was recorded by the Audit Team, and in addition, there are broader workshops and conferences organized and hosted by Westwind that staff are able to attend. Company records of staff training were well organized and appeared complete.

The Company also extends training opportunities to subcontractors. Many of the workshops put on for staff are open to contractors. Key events are the semi-annual contractor meetings that contractors are required to attend. At these meetings, Westwind usually emphasizes a current issue, with the selection of topic influenced by operator comments and suggestions, and there are opportunities for contractors to raise additional topics of interest to them. The spring meeting is also used to review the upcoming AWS. These meetings began in 2004. The Company is very concerned that contractors have up-to-date training and health and safety expertise for two reasons: the contractors are the people who actually put the ground-level components of SFM into

effect; and secondly, the Westwind Board is anxious that accidents be avoided for reasons extending from concern for the individual employees and their families to a desire to avoid mishaps that inevitably consume a great deal of management time and expense.

Westwind has been very proactive in understanding its health and safety obligations. The Company has sent its health and safety officer on workshops exploring the implications of applicable legislation, and has obtained legal opinion regarding appropriate actions to take to be in compliance. The Ontario Occupational Health and Safety Act imposes direct obligations on a licensee as defined under Part III of the Crown Forest Sustainability Act, and Westwind is almost certainly responsible[17] for all contractors that Westwind contracts with to provide services. This has factored into Westwind's compliance monitoring program.

In addition, Westwind's health and safety officer raised the point with the Audit Team that the passage of amendments to Bill C-45 effective March 31, 2004, sparked by the deaths at the Westray mine, has profound implications for Westwind, and indeed for many companies. The amendments increase the responsibility of Westwind to ensure that contractors and operators under its authority meet, at a minimum, the mandatory health and safety requirements. These include such elements as a written health and safety policy and an identifiable implementation program, certification to operate a wide range of equipment, a risk analysis with respect to health and safety, someone with certified first aid training on the work site at all times, etc. Companies with between 6 – 19 workers also need to have a worker-elected health and safety officer. Most Westwind shareholders and operators are deficient in these matters. Westwind has reviewed these issues with shareholders and contractors a number of times, and made efforts to work with individual companies to bring them up to standard. To date, these efforts have largely been ignored or resisted by almost all overlapping licensees and their contractors.

The difficulty here is the lack of leverage on the part of Westwind to enforce the requirements, partly because many of the overlapping licensees are out of compliance, and because they also generally lack the resources to become compliant. In such a situation, it appears that the only feasible way to bring the smaller operators into compliance is with Westwind's assistance, which is exactly the approach that is being pursued by Westwind. It is however important to note that due to limited leverage to enforce, much of the onus is on the small contractors to seek the assistance required. In the case of larger overlapping licensees, they have the resources and expertise to bring themselves into compliance with the requirements, but have apparently not done so.

Because a number of overlapping licensees and contractors are out of compliance with Bill C-45 requirements, according to information provided by Westwind, and Westwind itself faces possible liabilities because of this, the Audit Team considers it appropriate to issue a recommendation related to this issue.

The Audit Team also considers that the MNR is at significant risk of being found liable under the Bill C-45 amendments should there be an industrial accident involving a non-

[17] A legal brief obtained by Westwind Forest Stewardship Inc commented that an overlapping licence agreement (OLA) and a contract with an operator might be treated differently under the Criminal Code, but it was not likely; however the law firm could not provide a definitive opinion without further research.

compliant forest licence holder. The amendments make the legislation applicable to organizations, rather than corporations, and are directed at the "directing minds" behind applicable operations. Since MNR ultimately issues all licences, it is possible to conclude that they are a directing mind.

The Audit Team observed that section 21 of the SFL document requires the Company's compliance plan to describe responsibilities of various parties with respect to the FMP, the AWS, and *all applicable legislation, regulations and manuals … affecting the operations*. This clause suggests that the MNR requires all parties engaged in forestry operations to be compliant with all legislation, as one would expect. Because Westwind and Corporate MNR seem to share liability under Bill C-45, and because Westwind acting by itself has limited leverage in enforcing compliance, the Audit Team has issued the following recommendation to both parties:

Recommendation # 22

That Corporate MNR and Westwind jointly develop a strategy to bring overlapping licensees on the French-Severn Forest into compliance with the amended Bill C-45 and any other relevant health and safety legislation.

3.5.2 Documentation and Quality Control

Relevant documentation and records were well organized and essentially complete, on the part of both MNR and the Company. Minor exceptions related to some of the public notices and amendments were observed, and suggestions have been made to bring these areas up to the general standards maintained by both organizations.

3.6 MONITORING

3.6.1 General Monitoring

Westwind has been diligent in carrying out field surveys on the French-Severn Forest. Survey types include FRI update cruising, cruising for prescriptions (operational cruises or pre-cut cruising), tree marking audits, monitoring of operations, regeneration survival assessments and free to grow surveys. Many of these types of surveys involve multiple passes over the same forest stand. There are costs associated with completing surveys. It is possible that some cost savings could be realized if the targets and monitoring requirements were more clearly defined for the Great Lakes - St. Lawrence forest types, found in the French-Severn Forest. Regional MNR is currently working to describe practical interpretations for the requirements of silvicultural effectiveness monitoring, particularly in the partial cut systems of Central Ontario.

Suggestion # 6

MNR Region, MNR District and Westwind should make it a priority to refine and install a system to efficiently and accurately complete and report Silviculture Effectiveness Monitoring.

Compliance Planning

The delivery of the District's forest compliance program is formalized through Parry Sound District Annual Forest Operations Compliance Plans (AFOCP). These are stand-

alone documents separate from the District Annual Compliance Operations Plan (ACOP). AFOCPs for 2002-2003, 2004-2005 and 2005-2006 utilized a consistent format. They highlighted compliance priorities and summarize MNR's Action Plan – Monitoring – Inspection – Reporting Schedule, describing the minimum standards to which compliance inspections will be carried out. Although some terminology has changed with progress from FOCIS to Forest Operations Inspection Plan (FOIP), compliance inspection targets have remained unchanged over the five-year term except for Wood Measurement and Movement targets which increased from a 50%+ reconciliation of bills of lading in previous years to 100% in 2005-2006. This was necessary to address persistent issues with tickets being filled out incompletely and wood being hauled to destinations that were not approved in the *Authority to Haul Crown Timber* (ATH).

Stated MNR minimum standards were for each MNR inspector to annually carry out a prescribed number of inspections of all forest management activities. Random audit inspections were also prescribed for FMP stream re-classification amendments. However, this text should be updated to reflect that amendments are no longer required for values updates under the 2004 FMPM.

AFOCPs also described (in great detail) criteria for inspection and data reporting for MNR and Industry in relation to both CFSA Section 58 and Section 64 offences. Finally, they formalized a basic communication strategy to improve communication between forest management partners through bi-weekly meetings and monthly conference calls. The only real shortcoming identified in these documents was the apparent contradiction within the Action Plan – Monitoring – Inspection – Reporting Schedule between so-called "randomized" inspections and the prioritization of inspections on the basis of assessment of various risk criteria. Such an approach might better be described as stratified random sampling. Nevertheless, MNR was aware of this contradiction and is working to improve this wording to better reflect the principles of risk-based assessment in the next AFOCP.

Section 2.5 of the 2004 FMP for the French-Severn Forest contained the elements prescribed by the 1996 FMPM. These included a detailed description of the forest operations inspection program and provisions for monitoring in AOCs. Although no mention was made of any program to monitor the effectiveness of silvicultural treatments that would be exceptions to the silvicultural guides, the text did describe a program to monitor the effectiveness of AOC prescriptions which would be exceptions to the implementation manuals. Specifically, Moose Aquatic Feeding Area AOCs were to be implemented in accordance with the results of ongoing research funded by the Living Legacy Trust[18].

The discussion of the monitoring program also included a detailed description of the silvicultural effectiveness monitoring program for even and uneven-aged silvicultural systems and made reference to the Forecast of assessment of regeneration success. It also exceeded minimum requirements by describing a process for FMP Objectives and Targets monitoring involving the identification of "specific field targets" to achieve the corresponding landscape level targets and objectives identified in the FMP.

[18] Effects of timber harvest on the use of aquatic feeding sites in the Great Lakes-St. Lawrence and transition forests" rather than in accordance with the direction provided on Page 24 in Chapter 3.8, Habitat Management Considerations by Brian J. Naylor in Silvicultural Guidelines for the Tolerant Hardwoods. A. Corlett eds.

There was one minor area in which Section 2.5 potentially fell short of meeting FMPM requirements. Although the text stated that "whether forests are being managed under an even-aged versus uneven-aged silvicultural system will dictate the nature and scope of the silvicultural effectiveness monitoring program", it only partially discussed the relationship between the planned harvest area and the area expected to regenerate within the acceptable time periods described in Table FMP-10. The text did state that "clearcut areas to be managed for poplar/white birch that may be depleted during the first year of the period, and will, therefore, qualify for *regeneration assessment* by year 5 of the FMP" but did not discuss the timing of anticipated regeneration and assessment for area harvested under the shelterwood or uneven-aged systems.

In terms of five-year compliance planning, the *1999-2004 Forest Compliance Plan for the French/Severn Management Unit* (referenced in Section 2.5 of the 1999-2004 FMP) was prepared in accordance with the *Guideline for Forest Industry Compliance Planning (1998)* and provided the framework for developing Company Annual Compliance Schedules (ACS) for the first three years of the audit term from 2001 to 2004. It closely followed the structure outlined in the Guideline; containing a comprehensive set of Objectives and Strategies and thorough coverage of Roles and Responsibilities.

Similarly, the *2004-2009 Forest Compliance Plan for the French/Severn Management Unit* (included as Appendix XXI in the 2004 FMP) provided the framework for the development of Company ACSs during the last two years of the audit term from 2004 to 2006. The text stated that this document was also prepared in accordance with the *Guideline for Forest Industry Compliance Planning* (1998), though a revised version of the Guideline was published on April 23, 2001. Regardless, the plan was identical in structure to the former plan but was updated to reflect changes in policy direction.

In contrast, Company ACSs did not fully meet Guideline requirements. Specifically, the annual re-assessment of compliance priorities was not well documented nor was sufficient detail provided in the Monitoring-Inspection-Reporting Schedule.

Although it is stated in the 2004-09 Forest Compliance Plan that "*Westwind and the MNR will meet prior to the presentation of the annual compliance schedule to discuss the previous year's compliance program*" and that "*The discussion will focus on recurring compliance problems as well as the effectiveness and methods to improve the compliance program.*", the Company ACS did not demonstrate that this had occurred.

For example, the *2003-04 Annual Compliance Schedule for the French/Severn Forest* contained a listing of annual compliance priorities, but provided no rationale for their selection, thus failing to demonstrate that an assessment of various factors and considerations had been performed to identify compliance priorities. Additionally, the stated annual compliance priorities remained unchanged in 2004-05 and 2005-06 ACS, suggesting that they might not have been seriously re-assessed on an annual basis. Although minutes indicate that periodic meetings did indeed take place to discuss compliance issues and develop remedial strategies, the results of these meetings should have been cited or otherwise incorporated into the compliance priorities within the ACS.

As required, the ACS described criteria for the performance and reporting of inspections and provided a list of compliance inspectors by block (licensee referenced in naming convention) and activity; however it did not meet other requirements of the Monitoring-

Inspection-Reporting Schedule. In addition to the preceding, the schedule should have also contained information regarding the timing of operations (e.g., forecast start date or season of harvest) and direct cross reference to the specific resource values present (e.g., AOC prescriptions associated with each block). The 2004-05, 2005-06, and 2006-07 ACSs (the latter which was outside the scope of the audit) lacked the same details even though the requirement for these content items was recently re-stated in the *Guideline for Forest Industry Compliance Planning (2005)*.

Although the Audit Team recognizes that it would be difficult to provide reliable information regarding the timing of operations, MNR compliance staff indicated that it would be helpful to indicate summer vs. winter blocks. In addition, it should not be that difficult to make some type of linkage to the specific resource values present. Thus, the Audit Team believes that some improvement is possible without unduly increasing SFL workload.

Recommendation # 23

That the Company formally document the analysis of compliance priorities and meet the content requirements of the Monitoring Inspection Reporting Schedule in future Annual Forest Compliance Plans.

Compliance Monitoring and Performance

Generally speaking, the overall level of compliance monitoring on the French-Severn Forest was in substantial accordance with the approved FMP and AWS. Experienced and highly-trained staff perform compliance inspections on the operations of Overlapping Licensees, except in the case of Tembec who has been delegated the authority to perform inspections on its own operations. Westwind inspections are performed by 4 different inspectors each of whom is responsible for a zone of operations and a subset of Overlapping Licensees.

Many additional mechanisms were in place to monitor compliance and prevent the recurrence of infractions. These included tree marking audits, AWS special operating conditions, spring and fall operators meetings, periodic letters of direction, and various operational workshops (e.g., FMP Training, Silvicultural Effectiveness Monitoring Manual for Ontario (SEMMO), NDPEG, train the trainer).

In total, the Company performed 951 inspections over the five-year term of the audit (i.e., 563 for harvest; 222 for access, 141 for renewal and 25 for maintenance (Table 8)). The decreasing frequency of inspections over time (e.g., 241, 267, 198, 154 & 91 inspections annually from 2001-02 to 2005-06) can be attributed to FOCIS double-counting for non-compliance inspections in the early part of the audit term, and the cessation of start-up inspections in the latter half of the term.

Similarly, the level of MNR inspection was appropriate to the scale of operations and the SFL Compliance record. A good working relationship exists between MNR and SFL staff due to frequent communication and the fact that most SFL staff formerly worked for MNR. Thus, MNR inspectors are confident in industry's willingness to report non-compliances and in their own ability to detect them.

Table 8. Frequency of Inspections and Non-Compliant Reports by SFL-holder and MNR.

Year	Inspections by SFL-holder		Inspections by MNR	
	Total	Non Compliant	Total	Non Compliant
2001-2002	241	9	77	33
2002-2003	267	9	72	17
2003-2004	198	12	46	24
2004-2005	154	9	34	4
2005-2006	91	8	19	4
Sum	951	47	248	82

MNR performed 248 inspections during the five-year term of the audit (156 for harvest; 54 for access, 37 for renewal and 1 for maintenance (Table 8)). Modest AFOCP targets were easily achieved. This level of monitoring appears to have been sufficient since the reported classes of non-compliances were consistent with the types of non-compliances reported by the Company and observed in the field.

There were, however, notable differences in the frequency of reported non-compliances. This was particularly evident in the first three years of the audit term with 30 industry-reported non-compliances vs. 74 MNR-reported non-compliances. However, this difference is not as great or as significant as it may seem.

One reason is that MNR submitted FOCIS verification reports for each industry reported non-compliance, in addition to one or more reports for MNR detected non-compliances. For example, 33 MNR reported non-compliances in 2001-02 represented 22 separate incidents, nine of which were originally reported by industry. Similarly, 17 MNR reported non-compliances in 2002-03 represented only 10 separate incidents, nine of which were originally reported by industry.

MNR was also reporting classes of non-compliances that industry was not. For example, MNR reported non-SFL infractions included the construction of unauthorized trails by snowmobile clubs and harvest trespasses committed by non-licence holders. MNR also performed Bills of Lading (BOL) audits and reported non-compliance with the conditions of the *Authority to Haul Unscaled Crown Forest Resources* (ATH).

Also, during the first three years of the audit term, there were significant differences in the reported rates of wasteful practices by MNR and industry. In many cases, the Company judged instances of wasteful practices to be In Compliance with Comments while MNR judged the same practices to be Non-Compliant.

In the last two years of the audit term however, this trend actually reversed with industry reporting 17 non-compliances compared to only 8 reported by MNR. This was due in part to a dramatic decrease in the frequency of wasteful practices and implementation of the new internet-based FOIP which eliminated the double-counting of non-compliances.

In 2002-03, MNR reported four non-compliances related to AOCs. These involved situations where roads were located too close to Areas of Concern. In 2003-04, there were three instances of access-related AOC incursions; however, none of these were serious in nature. MNR compliance inspectors suggested that such infractions might be

avoided by instituting the practice of marking Modified Management Areas (MMA). Existing roads and old skid trails frequently pass in and out of MMAs and their use outside of designated timing windows would therefore be non-compliant.

However, SFL staff contended that this risk is overestimated. By their account, only 13 of the 310 reports on AOC activities from 2002 to 2006 were deemed not-in-compliance and only 2 of those in relation to an MMA. The rest were simple reserve incursions deemed to be of minor significance or for which no significance class was assigned. SFL staff argues that most MMAs have only a timing restriction (e.g. stick nests) or conditions on the construction of main skid trails (e.g. fishery values) and that the cost of running two sets of lines (reserve and MMA) would be prohibitive relative to the potential risk.

A better approach would be to deal with the situations where it is known that operations will be occurring within an MMA during the period of restriction. Since little harvesting occurs before July 1 and since most timing restrictions expire at the end of July, there is only a month during which there is any concern. If harvesting must occur within an MMA during this period and there is no opportunity to easily stay away (e.g., setting an easily recognizable physical boundary for operations), then marking the adjacent portion of the MMA would be feasible. In fact, this has been done on at least a few occasions.

Finally, a persistent lack of adherence to the conditions of the ATH was evident throughout the entire term of the audit. Although non-compliant circumstances were identified in 2001-02 and 2002-03, there was a significant increase in the frequency of non-compliances late in the audit term. In 2003-04, four licensees were involved in six separate incidents. Again, in 2004-05, several non-compliant incidents were reported. Most of these involved the improper completion of BOL and the delivery of products to unauthorized destinations.

For the most part, this lack of operational control resulted from the failure of subcontractors to invest sufficient resources in the training of truck drivers. In addition to BOL and destination infractions, other symptomatic non-compliances included wasteful practices, high stumps, and the use of unauthorized scalers. In annual reports, MNR has recommended that licensees should take more care to ensure that truck drivers are properly educated and informed of the requirements.

Follow up action included the continuation of MNR presence at the annual operators meeting to reiterate the importance of following the conditions of the ATH and review procedures for filling out and managing BOL. In addition, MNR increased its BOL reconciliation audit from 50% to 100%. Although the Company can encourage licensees to comply with the conditions of the ATH, this responsibility currently rests with MNR and it appears that they are already employing reasonable measures to remedy the situation.

Under the *Guideline for Forest Industry Compliance Planning (2005)*, compliance related SFL roles and responsibilities may be delegated to an overlapping licensee with the approval of MNR. Only Tembec has been delegated this authority on the French-Severn Forest. Overall, its performance can be characterized as very good, with Tembec having performed sufficient numbers of inspections with certified inspectors and achieved a lower-than-average rate of non-compliance relative to its harvest level.

In comparison to other licence holders, Tembec also operated under more challenging conditions with large areas, poor access, lots of crossings, and adjacency to cottagers.

Field observations suggest that its road building and deactivation is first rate, and that superior cut layout for feller-bunchers resulted in greatly reduced skid trail coverage. Tembec's steadily improving compliance record over the term of the audit suggests that its internal compliance prevention/education program was effectively delivered and provided for sufficient training of staff to MNR competency standards.

Compliance Reporting

Comparison of AR-12 reports with FOCIS data revealed some minor inconsistencies between the number of reported inspections and non-compliances. Most of these differences were related to inspections performed beyond the end of the fiscal year but not captured in the original AR-12s. Although more effort to ensure that all inspections were completed before the end of the fiscal year would certainly have reduced the extent of this problem, the possibility for such inconsistencies in the future has been eliminated with implementation of the FOIP program and delayed annual reporting of compliance statistics until the fall instead of the spring following operations (2004 FMPM). Tables AR-12 & 13 are now produced directly from the centralized on-line FOIP database and such errors should now be a thing of the past.

Both SFL and MNR staff periodically failed to submit reports for compliant inspections within the required 20 day time limit. With respect to non-compliances, though, reports were provided within the 5 day time limit with verbal notification usually being given within 24 hours.

3.6.2 Annual Reports

The Company achieved excellent overall performance in the submission of annual reports for operations performed during the term of the audit. An analysis of submission dates and interviews with SFL and MNR staff revealed that submissions were always on time, with the exception of the Year 10 report for which the submission deadline was unclear and some content elements were difficult to address. MNR staff was impressed with the Company's high degree of commitment to submit reports on time. Similarly, report submissions were promptly reviewed by MNR, although this was difficult to verify without the full availability of Forest Information Manual (FIM) portal e-mail messages to verify submission dates.

With respect to content, Westwind annual report submissions during the term of the audit substantially met the requirements of the FMPM (1996). They were consistently well written and contained all of the requisite components. In particular, they contained good discussions of emerging trends and deviations from planned activities. They also contained exceptionally comprehensive discussions of utilization. No significant shortcomings in content or accuracy were detected, except for the occasionally late submission of T&C 77/34 reports by MNR.

A Year Ten Annual Report was prepared as required for the 2003/04 Annual Report, and is discussed below.

3.6.3 Report of Past Forest Operations/ Year Ten Annual Report

The audit reviewed the Report on Past Forest Operations (RPFO) that was completed in or about March 2003, but this review was cursory, since MNR directed the Audit Team to focus on the more recently completed Ten-Year Annual Report, which was completed

for the 2003-04 year. This was the first year for which Ten-Year Annual Reports were required, and it was a phase-in year. The report author was hampered in preparing a number of the tables because previous plans and reporting had not required the necessary calculations, but he did a credible job with the available information.

The additional discussion in the Ten-Year AR, compared to a standard AR, is thoughtful but reflects a lack of long time series for many of the data that are being reported, and some changing methodologies (e.g. some wildlife habitat matrices and spatial models changed between plans, and forest unit definitions changed somewhat). The report does provide insightful discussions into some trends where possible. This is particularly true for the discussion of harvest trends in the context of indicators of sustainability. These trends are discussed in this report in Sections 3.4.2 and 3.7.4. Other elements of the report, including renewal, usage of the AHA, a review of modelling assumptions, and an assessment of the status of implementation of recommendations of the previous IFA are also discussed in various sections of this report. The sustainability assessment is located in section 3.7.2.

3.7 Achievement of Management Objectives and Forest Sustainability

The IFAPP directs the Audit Team to assess the sustainability of forest management using a methodology described in the IFAPP. The IFAPP states that "Compliance with the applicable criteria [of the IFAPP] will determine whether the forest unit complies with the general principle of sustainability." The field observations of the Audit Team are also to be considered in assessing sustainability. Section 3.7.1 assesses the extent to which the objectives of the 1999 FMP were achieved during the audit period, as well as a preliminary assessment of the achievement of objectives of the 2004 FMP. Sections 3.7.2 and 3.7.3 review the information in the Comparison and Trend Analysis and RPFO, respectively, while section 3.7.4 presents our conclusions regarding sustainability.

3.7.1 Achievement of Management Objectives

The Audit Team reviewed the extent to which objectives set out in the 1999 FMP were achieved – an assessment of each objective is shown in Table 9. The overall assessment is that the Company's objectives generally achieved their planning direction as described in the FMP. Many of the objectives were very broad, others were very qualitative, and still other objectives pertained to conditions that the forest was to reach in 100 years. Objectives of these sorts could not be meaningfully assessed. Other key objectives, such as the harvest volume objective and associated targets, were only partially met, since the average annual harvest volume was 47% of planned. The actual harvest area was roughly 38% of planned.

Table 9. Assessment of the Achievement of the Goals and Objectives of the 1999 FMP.

Goals/ Objectives	Achievements	Explanation
Forest Diversity		
Broad Forest Diversity Objective: To ensure, within realistic parameters, that forest management practices do not result in a significant change in biodiversity.	This broad objective was intended to be addressed through efforts to address the more specific objectives below.	Many of the diversity objectives were stated so broadly as to make assessment of their attainment difficult. It was necessary to look at general practices rather than specific achievements to assess most of the objectives.
Landscape and Stand Forest Diversity Objectives • To maintain a diverse forest landscape comprised of a network of ecological units including old growth (based on vegetation species occurrence and dominance in the overstory, understory and at ground level, as well as soil characteristics, and comprised of various size and balanced age classes). • To maintain a range of native tree species within and/or between forest stands in the management unit. • To increase, where practical and necessary, the proportion of under-represented tree species and forest units, which would naturally be more abundant if European settlement activity had never occurred.	• The first two aspects of this objective are too subjective to assess. • Some progress was made in increasing under-represented tree species by 1) carrying out site preparation for yellow birch, 2) planting red oak, 3) implementing a strategy of group openings around black cherry trees and 4) regeneration work restoring a higher proportion of conifer such as pine and white spruce into mixedwood stands.	
Old Growth Objectives • To sustain the representation of old growth white pine stands. • To contribute to the provincial and regional targets for the protection of old growth pine stands. • To expand the representation of old growth stands to the other forest types of the management unit, in accordance with evolving policy and guidance.	• The first aspect of this objective is too subjective to assess meaningfully. • These objectives were met primarily by not allocating old growth stands during plan development pending the release of the since-produced old growth policy. • Old growth was not defined in the plan, so it is difficult to assess.	

Goals/ Objectives	Achievements	Explanation
Genetic Diversity Objective: • To protect and conserve the genetic diversity of indigenous tree species.	This objective is too broad to assess meaningfully. However, the use of partial cutting systems and seed sources from within appropriate seed zones address the intent of maintenance of genetic diversity of indigenous trees.	
Wetlands Objective: • To maintain the area and function of wetland ecosystems.	This objective was addressed through implementation of the guidelines to protect fish habitat.	
Social and Economic		
Broad Social and Economic Objective: • To provide society with a sustainable harvest of forest-based material and social values while maintaining the ecological and productive capacity of the forest and cultural values.	This is a very broad objective and we conclude that since the forest has been managed sustainably during the course of the audit period, this objective has been met.	
Timber Production Objective: • To produce a continuous and sustainable supply of timber for forest industry and to upgrade the quality of the forest products derived while maintaining forest sustainability.	The Company did produce a continuous supply of timber that was well below planned but in line with historical harvest levels. The harvest prescriptions in tolerant hardwoods, pine stands, and off site stands have emphasized the retention of higher quality material, hence the quality of future harvests has increased.	
Other Land Uses Objective: • To minimize conflict between forestry operations and other land uses.	There were no land use conflicts identified. The Company is proactive dealing with stakeholders. Managing trail use is a challenge.	
Resource Access Objectives: • To ensure access is provided to forest resources which is appropriate for the purpose and frequency of use. • To ensure that access is planned in such a way that protects cultural and natural heritage areas and features and does not conflict with remote tourism areas.	Access was created to harvest stands and access planning was undertaken, which includes a component that deals with the future and eventual decommissioning of the road. Heritage values were protected. As mentioned above, managing trail use and use of ATVs is a challenge.	

Goals/ Objectives	Achievements	Explanation
Fisheries Objective: • To manage forest cover for the protection and enhancement of fish habitat.	This broad objective was addressed through the use of the fish habitat guidelines.	
Wildlife Objective: • To manage forest cover for the protection and enhancement of wildlife habitat.	This objective was addressed though the implementation of the wildlife guides and AOCs intended to protect specific wildlife values.	
First Nations Objectives: • To ensure forest management practices complement and where possible enhance First Nation resource use. • To protect cultural and spiritual values. • To support initiatives by interested First Nation communities for economic development of forest resources and forest-based uses of the French-Severn Unit while maintaining forest sustainability, and considering existing uses and commitments.	While the degree of interaction with First Nations has been lower than the Audit Team would have liked to have seen, reasons for this range from lack of interest due to other priorities at some First Nations, changes in liaison staff at MNR and at some First Nations that disrupted discourse, and perhaps also a certain degree of inertia following previous rounds of interaction which resulted in Native Values Background Reports being developed in the late 1990's. Known cultural and heritage values were protected.	Do not seem to have been many initiatives from First Nations to start up forest-based businesses. Some tending contracts were let to First Nations but the contractor did not continue past a couple of years.
Tourism Objective: • To provide for a range of quality tourism opportunities in response to demand while maintaining forest sustainability.	This very general objective seems to have been met. There were no material conflicts between the tourism sector and Westwind or MNR during the audit period.	
Recreation Objective: • To provide for a range of quality recreation opportunities, in response to demand, while maintaining forest sustainability.	This very general objective seems to have been met. There were no material conflicts between recreationalists and Westwind or MNR during the audit period.	
Values Dependent on Forest Cover		
Broad Objective for Values Dependent on Forest Cover: • To protect and maintain natural values dependent upon forest cover while enabling the sustainable use of forest resources.	This broad objective was intended to be addressed through efforts to address the more specific objectives below.	Many of the objectives in this section are addressed through implementation of more-or-less standard forest management

Goals/ Objectives	Achievements	Explanation
		activities, such as the use of AOCs and the MNR's various wildlife habitat guides.
White-Tailed Deer Objective: • To identify and protect white tailed deer habitat.	This objective was addressed though implementation of the direction of the deer guide and its use as implemented through deer habitat AOCs. Deer habitat was identified through MNR district staff surveys, however Recommendation # 11 notes that values surveys are not adequately funded, and directs MNR to provide more appropriate funding for values collection.	
Moose Objective: • To identify and protect moose habitat.	Moose aquatic feeding areas are inventories using aerial surveys, however as Recommendation # 11 notes, funding is not adequate to ensure an appropriate level of surveying is conducted. Moose habitat was provided through implementation of the moose habitat guide and NDPEG.	
Pileated Woodpecker Objective: • To protect preferred pileated woodpecker feeding, nesting and roosting habitat.	Pileated woodpecker habitat was provided through implementation of the measures identified in the pileated woodpecker guide.	
Red Shouldered Hawk Objectives: • To protect red-shouldered hawk nesting habitat.	Red shouldered hawk habitat nesting was provided primarily through the use of an AOC prescription specific to their nesting sensitivities and requirements.	
Other Forest Nesting Raptors and Great Blue Herons Habitat Objective: • To protect known nesting sites of Coopers hawks, northern goshawks, osprey and great-blue herons.	AOCs were developed and implemented to protect the nesting habitats of forest nesting raptors and great blue herons.	
Massasauga Rattlesnake Objective: • To protect known and potential critical habitat for massasauga rattlesnakes.	An AOC prescription was developed and implemented for the protection of rattlesnake hibernacula.	

Goals/ Objectives	Achievements	Explanation
Silviculture		
General Objective: • To ensure that all harvested lands are regenerated (naturally or artificially) to the most silviculturally appropriate species and tended until Free-To-Grow, using the most appropriate and cost effective methods to achieve the desired future forest condition, • To continue to research, test and implement, viable, economical and ecologically-based alternatives for forest renewal and forest maintenance which will reduce dependence on herbicides.	Stands were regenerated to the most appropriate species, with some off-site poplar stands being converted to white pine. Other than the hardwoods, where successful renewal is usually not difficult to obtain, there was a deficit in successful renewal of conifer stands, especially following white pine seeding cuts. Heavy hardwood competition on many white pine sites necessitates a more ambitious and expensive treatment regime on these sites. The Forest Manager's report identifies 14,275 ha harvested using even-aged techniques. Of this, 7,498 ha (53%) has been surveyed for FTG and 2,852 ha declared successfully FTG (20% of total harvest area). The Company has modified the shelterwood harvest systems used on this forest to improve the economic and silvicultural returns.	

Table 10. Assessment of the Achievement of the Goals and Objectives of the 2004 FMP after Year 2 of the FMP.

Goals/ Objectives	Achievements	Explanation
Forest Diversity		
Broad Forest Diversity Objective: To ensure that forest diversity is maintained over the long term through sustainable forest management practices.	It is too early to assess the extent of achievement of many of these objectives. However, in cases where there are annual targets, the achievement during the first two years can be assessed.	
Landscape and Stand Forest Diversity Objectives • To maintain a range of native tree species. • To increase, where practical and appropriate, under-represented tree species and forest units, in proportions similar to the pre-settlement forest.	This is a general objective that the FMP plans to meet. White and red pine, hemlock, white spruce, red oak, white ash and yellow birch were specifically identified as being species that would be increased through management.	
Landscape Level Targets • Maintain levels of red and white pine forest ecosystems as represented by forest units PWUS and PWUS2 at or above current levels (88,529 ha) across the entire Crown forest. • Maintain the area of OR1 forest unit (All Forest) at or above current levels (16,030 ha) over 100 year planning horizon.	The 2004 FMP is intended to meet these targets.	
Field Specific Targets: • Carry out a minimum of 80 ha of mechanical site preparation or prescribed burning to promote regeneration of yellow birch over the five-year operating period of the plan. • Implement silviculture prescription(s) in at least 40 ha to convert off-site tolerant hardwoods or mixed woods to white pine/white spruce/red pine (i.e., PWUS2 or MWUS) over the five-year operating period of the plan. • Plant a minimum of 20,000 red oak seedlings over the course of the 5-year operating plan. • Carry out silvicultural prescriptions to actively (i.e. site preparation and/or planting) to regenerate	During the first two years of the 2004 FMP, no prescribed burning was undertaken and in the first two years, a total of 99 ha of mechanical SIP was done in all forest units. It is not known how much conversion has been undertaken during the first two years of the FMP, but some has been implemented. 5470 red oak trees were planted in 2004/05, which is a rate in excess of that required to meet the target. In 2004/05, 1120 hemlock trees were planted, which would cover roughly 1 hectare. The number of red pine group openings planted to red pine was not available.	

Goals/ Objectives	Achievements	Explanation
hemlock on at least 25 ha over the 5-year operating plan on forest units other than HE1. • Regenerate pockets of red pine within white pine dominated stands during the seeding cuts by creating at least 30 group openings that are planted to red pine.		
Genetic Diversity Objective: • To protect and conserve the genetic diversity of indigenous tree species.	This is being done through ensuring that the sources of seed used for planting stock are acceptable according to seed transfer protocols. Natural renewal also contributes to the maintenance of genetic diversity.	
Field Specific Targets: • Carry out silvicultural prescriptions to actively (i.e. site preparation and/or planting) to regenerate red spruce on at least 20 ha over the 5-year operating plan. • Mechanically site prepare a minimum of 60% of PWUS, PWUS2, or MWUS shelterwood seeding cut areas to promote natural regeneration in these stands. • Carry out silvicultural prescriptions that have an objective of regenerating black cherry on a minimum of 80 ha over the five-year operating plan through the use of group selection or shelterwood.	No red spruce planting was undertaken in 2004/05, and the amount of mechanical site preparation undertaken in the first two years is 99 ha, which is well short of the rate implied in the five year target of 4,065 ha. The Audit Team observed black cherry renewal in a number of areas, including group selection and shelterwood. The areas involved were not available.	
Old Growth Objectives • To increase/maintain the area of old white pine/red pine stands. • To manage /protect representative ecosystems of old growth white pine/red pine stands. • To contribute to the provincial and regional targets for the protection of old growth pine stands. • To expand the representation of old growth stands to other forest types of the management unit, in accordance with policy and guidance.	These objectives are intended to be addressed by the targets below.	

Goals/ Objectives	Achievements	Explanation
Landscape Level Targets • Secure and maintain a minimum of 5% of the PWUS forest unit (All Crown Forest) in an age class greater than 150 years. Current level is < 1.0%, 5% will be attained by 2034. • Secure and maintain a minimum of 10% of the PINE forest unit grouping (PWUS and PWUS2 forest units) (All Forest) in an age class greater than 150 years. Current level is 1.7%, 10% attained by 2034. • Secure and maintain a minimum of 30% of the HE1 forest unit (All Forest) in an age class greater than 180 years). Current level is 17.0%, 30% will be attained by 2034.	It too early to assess these targets; although the levels identified in them are consistent with modelling efforts. Harvest efforts have been identified and implemented consistent with these objectives.	
Wetlands Objective: • To ensure that the area and function of wetland ecosystems are not impacted by forest operations.	As with the comparable 1999 objectives, this will be addressed through implementation of the guidelines to protect fish habitat.	
Social and Economic		
Broad Social and Economic Objective: • To provide society with a sustainable harvest of forest-based material while considering the diversity of social, cultural and environmental values present in the forest, in order to benefit all users and citizens with the opportunity to benefit from the available products and services that the forest provides.	The modelled and planned level of operations on this forest is consistent with this broad objective.	
Timber Production Objective #1: • To continue to provide opportunities for local employment, including First Nations communities, in resource sectors that are dependent on the use of forest resources.	The modelled and planned level of operations on this forest is consistent with this broad objective.	

Goals/ Objectives	Achievements	Explanation
Targets: • To support First Nations communities' efforts in building capacity to actively participate in forest management activities and provide for fuelwood areas for local communities • To offer tending contracts for 300 ha for stem-specific treatments annually throughout the five-year operating plan.	Westwind has had mixed success in supporting First Nations capacity building. There are more attractive business areas for many First Nations, and one contractor who provided a spacing team for two years during the audit period has since withdrawn due to difficulties in maintaining personnel.	
Timber Production Objective #2: • To provide a continuous, predictable, high-quality and sustainable supply of forest products to the forest industry, consistent with existing wood supply commitments, in full compliance with all applicable legislation, regulations and guidelines.	The modelled and planned level of operations on this forest is consistent with this broad objective.	

Targets:
 	
• Make available a relative constant supply of white pine/red pine volume so that there is no decrease greater than 5% from one term to the next while allowing up to a 10% decrease for other species groups.
• Timber production targets for the five-year plan:
  • 52,000 m3 of white pine/red pine sawlogs;
  • 48,000 m3 of tolerant hardwood sawlogs;
  • 2,000 m3 of poplar/white birch sawlogs;
  • 30,000 m3 of poplar/white birch volume;
  • 8,000 m3 of spruce-pine-sawlog volume;
  • 15,000 m3 of spruce-pine-fir volume;
  • 7,500 m3 of other conifer (mainly hemlock) volume; and
  • 250,000 m3 of total volume.
	The modelled and planned level of operations on this forest are consistent with these targets. During the first year of the 2004 FMP, timber production levels have averaged:
	
	• 73,279 m3 of white pine/red pine sawlogs;
	• 49,982 m3 of tolerant hardwood sawlogs;
	• 1,657 m3 of poplar/white birch sawlogs;
	• 9,694 m3 of poplar/white birch volume;
	• 2,304 m3 of spruce-pine-sawlog volume;
	• 748 m3 of spruce-pine-fir volume;
	• 1,278 m3 of other conifer (mainly hemlock) volume; and
	• 194,202 m3 of total volume.	

Tourism Objectives: • To minimize the impacts of forest operations on the	Westwind has very good relations with tourism operators and has been able to reach agreements with operators who have operations near allocated	

Goals/ Objectives	Achievements	Explanation
economic viability of the resource-based tourism industry in the area. • To ensure the forest operations are carried out so as to minimize aesthetic impact wherever possible. • To maintain the viability of the tourism industry by protecting tourism values identified during the FMP process through the application of Management Guidelines for the Protection of Forestry and Resource Based Tourism and the use of RSA's as one method of protecting and sustaining these values.	areas. The Audit Team did not hear of any unresolved conflicts in this regard.	
Other Land Uses Objectives: • To conduct operations in a manner that minimizes conflict with crown land use activities. • To ensure the forest operations are carried out in accordance with crown land use plans.	This is a general objective that is difficult to evaluate at this time in the plan. The Audit Team did not hear of any cases where there were conflicts with Crown land use, although MNR's difficulties in regulating ATV use were identified as an issue in this audit.	
First Nations Objectives: • To ensure the protection of native values. • To support initiatives by interested First Nation communities for economic development of forest resources and forest-based uses of the French-Severn Unit.	Known First Nations values were protected using areas of concern. No instances where a known (or unknown) value was comprised were identified by the Audit Team.	

Resource Access Objectives:
• To ensure access is provided to forest resources which is appropriate for the purpose and frequency of use consistent with:
  • principles of sustainable forest use;
  • sustainable management of other crown resources;
  • private landowner rights;
  • public safety; and
  • Ontario's Living Legacy Land Use Strategy.
	The Company's relationships with stakeholders, the requirements of the planning process, and the lack of any concerns or conflicts identified by the Audit Team suggest that this objective is being met.	

Goals/ Objectives	Achievements	Explanation
Recreation Objective: • To ensure that known recreational values are identified and impacts minimized during forest operations.	The requirements of the planning process, and the lack of any concerns or conflicts identified by the Audit Team suggest that this objective is being met.	
Cultural Heritage Objective: • To ensure that known and high potential cultural heritage values are identified and protected during forest operations.	The requirements of the planning process, and the lack of any concerns or conflicts identified by the Audit Team suggest that this objective is being met.	
Target: • To ensure that the Cultural Heritage AOC prescriptions for Known and High Potential areas are implemented as per FMP-17.	AOC prescriptions for known and high potential areas were being implemented as per FMP-17, and the lack of any concerns or conflicts identified by the Audit Team suggest that this target is being achieved.	
Values Dependent on Forest Cover		
The 2004 FMP contains the following objectives related to values dependent on forest cover: fisheries, wildlife, white-tailed deer, moose, pileated woodpecker, red-shouldered hawk, forest nesting raptors and great blue heron habitat, beaver, and massasauga rattlesnake habitat. The objectives are all consistent with management of the values based upon the MNR's forest management guides and AOC prescriptions from the FMP. Some of the objectives have quantitative targets associated with them. The targets generally identify the habitat levels associated with the SFMM modeling of the selected management alternatives. Management of the forest has not resulted in significant infractions related to values AOC prescriptions (with the exception of the red-shouldered hawk AOC violation discussed in Section 3.4.1). Management of the forest is proceeding as directed according to MNR's wildlife guides and the prescriptions of the FMP. Although the habitat levels predicted by SFMM, and used for setting quantitative targets, may not be accurate, based on the under-harvest of the forest, the targets have sufficient flexibility so that they are still likely to be achieved. Therefore, given that: • many of the objectives are general in nature; • the targets are based on habitat levels modeled by the selected management alternative and management of the forest is not likely to severely impact the achievement of the predicted modeled levels of habitat; it is not possible to say that the objectives/targets will not be achieved. Furthermore, as the plan has only been implemented for two years at the time of audit, there is not a sufficient basis upon which to comment on the attainment of the long-term objectives/targets.		
Silviculture		
General Objective: • To ensure that all harvested lands are regenerated	The modelled and planned level of silvicultural operations on this forest is consistent with this broad objective, and the operations viewed by the Audit	

Goals/ Objectives	Achievements	Explanation
(naturally or artificially) to the most silviculturally appropriate species and tended until Free-To-Grow, using the most appropriate and cost effective methods to achieve the desired future forest condition, • To continue to research, test and implement, viable, economical and ecologically-based alternatives for forest renewal and forest maintenance which will reduce dependence on herbicides.	Team were also consistent with it.	
Silviculture Targets: • Implement at least one prescribed burn for the promotion of red oak establishment and maintenance (minimum of 20 ha) during the five-year operating plan; • Carry out tending activities and/or fill planting activities (white pine/ red pine) on at least 2,000 ha of white pine forest (PWUS, PWUS2) during the five-year operating plan; • Of all tending activities, utilize stem specific treatment or brush saw treatment on a minimum of 1,000 ha during the 5-year operating plan; • Carry out stand improvement activities in all stands under single tree selection and shelterwood (if required); • Carry out commercial tending of PWUS2 in the red pine plantation portion of that management unit in the five-year operating plan period to the level of at least 100 ha; • Maintain the Forest Renewal Trust Fund at a level that must be sustained to meet legal requirements and carry out necessary silviculture activity. This includes projects being partially funded through the Forestry Futures Trust.	The Company is on track to meet some of these targets, but has fallen behind the average level of operation required to meet others: • The prescribed burn has not yet been conducted; • In 2004, 687 ha of re-treatment planting was undertaken, and 53 ha was re-treated in 2005/06 – the majority of these areas would be Pw/Pr; • Ground herbicide treatments were applied to 320 ha in the first two years of the FMP; • In 2005/06, 3,800 ha received stand improvement (versus 3,938 ha cut using selection or shelterwood methods), and 2,942 ha of selection harvest area (same as area harvested) received stand improvement money in 2004/05 (area of shelterwood receiving stand improvement is unknown); • No commercial tending seems to have occurred in the first two years; and • The Renewal Trust has not been maintained at required levels due to MNR's decision to allow one overlapping licensee to fall behind on its payments.	

3.7.2 Review of RPFO Assessment of Sustainability

As discussed above in section 3.6.3, the Audit Team was directed to focus on the more recently completed Year Ten Annual Report, which was completed for the 2003-04 year, rather than the RPFO that was completed in early 2003.

The Year Ten AR author was hampered in preparing a number of the tables related to sustainability assessment because previous plans and reporting had not required the calculation and presentation of data that are to be used in sustainability assessment. Nevertheless, the report author used what information was available in efforts to draw conclusions regarding the sustainability of forest management.

The report reviewed the change in managed forest condition, landscape pattern indices, wildlife habitat, forest productivity and landscape processes. Because of the requirements of the reporting format and the limited history of information available, most assessments were based on changes from 1999 to 2004. This is a very short window of time for which to gauge forest sustainability, and this caveat is made clear in the report.

The change in managed forest condition is complicated by the fact that approximately 40,000 ha of production forest was removed from the managed portion of Crown forest during the 1999-2004 term for the creation of new protected areas as part of the Ontario Living Legacy exercise. In addition, changes in the definitions of forest unit further complicated comparison between the two time periods so that it became virtually impossible to state anything meaningful regarding changes to the Forest on a forest unit bases. The report does attempt to provide a description of interpolated changes in forest units, but with such caveats, conclusions are hard to make. At a gross scale, the changes in forest units that are noted are likely within the confidence limits of the data used to assess the changes and so it cannot reasonably be concluded that there are any sustainability concerns regarding changes in forest unit areas.

The total Crown managed forest declined by about 27,000 ha between 1999 and 2004. This reflects the loss of about 40,000 ha to protected areas, and increases in some (primarily lowland forest units) related to reclassification which reduced areas of unmanaged forest related to poor drainage conditions.

The indicators of landscape pattern and forest diversity used in Table RPFO-15 are difficult to interpret even when consistent data are used. (The indicators include Shannon-Weiner index of diversity, mean nearest neighbour, interspersion and juxtaposition index.) The Year Ten AR notes that, although the changes in indicator values identified in the table are relatively slight, little insight can be garnered from the table due to the changes in data used for the analyses and also because the computer programs used to generate the statistics also changed during the 1999-2004 period. The Audit Team concurs with this assessment.

Table RPFO-16 compares the habitat (area) values for the selected species of wildlife used as indicators. The RPFO notes, and the Audit Team concurs that there were no significant changes in wildlife habitat areas between 1999 and 2004. However, again we note that the changes in the data used in the 1999 and 2004 exercises make comparisons difficult.

Table RPFO-17 describes the change in water yield based on the amount of disturbance in the last 10 years, and concludes that it is not significant.

Overall the Year Ten AR indicates that the forest has been managed sustainably. This is a reasonable conclusion given the indicators which are used for the assessment, the level of harvesting which has been conducted over the past plan terms, and the difficulties associated with interpreting the data which were available for use in the assessment.

3.7.3 Review of Comparison and Trend Analysis of Planned versus Actual Forest Operations

The Audit Team reviewed the Report titled "Comparison and Trend Analysis of Planned versus Actual Forest Operations" and found that the format and content met the requirements expressed in the IFAPP. This Report was prepared by the Company staff and is included as Appendix I of this report.

The Trend Analysis identified a number of key trends that have been in place since the mid-1990's at least, and remained in place on the French-Severn Forest through the audit period. These include:

- harvest levels that are roughly 50% or less of the planned levels;
- corresponding levels of renewal in relation to planned amounts;
- funding constraints, which have been exacerbated by the higher than expected area of backlog on the forest; and
- difficulties managing white pine due to the low harvest volumes and expensive suite of treatments required to obtain renewal with a reasonable certainty.

The Trend Analysis does a very thorough job of outlining the factors behind the trends, and describes the adjustments that Westwind has made in response to the situation and the evolving level of understanding. The trends, and factors driving them, were very similar to those that were identified in this audit, and the information in the tables matches the source documents. In conclusion, the trend analysis has been reviewed with respect to criterion 7.4 in the IFAPP and it was found to be correct and complete.

3.7.4 Conclusions Regarding Sustainability

The Audit Team has reviewed the 1999 and 2004 FMPs, the Annual Reports, the RPFO prepared in 2003 and the more recent Year Ten Annual Report, and the Comparison and Trend Analysis documents, as well as undertaking an assessment of the extent to which the objectives of the 1999 FMP were met. The Audit Team felt that it was premature to draw any conclusions regarding the achievement of objectives in the 2004 FMP, since only one or two years worth of data were available at the time of the audit.

There are definitely management challenges on the French-Severn Forest. The principle one relates to the silvicultural challenges on the unit, which are related to difficulties in funding appropriate levels of silvicultural treatment. This challenge has been present throughout the last 15 years, but has generally been manageable until recently, when a reduction in the financial buffer (the funds in excess of the minimum requirement) in the FRT, a reduction in investment income earned by the balance in the

FRT, and difficult economic conditions have combined to force some changes in management approach. The Company has responded by cutting back on the treatment of backlog area and concentrated on renewing current harvest areas. The Trend Analysis acknowledges that some of the tending that "should" take place in pine shelterwood does not due to funding constraints, and the auditors observed that a considerable number of the pine shelterwood sites viewed in the field required tending now or soon. However, the Company has responded by moving the pine sites to a three-cut, and in some cases, a two-cut shelterwood harvest system. In order to improve the economic attractiveness of harvesting some low quality hardwood sites, the Company has moved a considerable area of tolerant hardwoods (approx 18,000 ha) from the selection management forest units to the shelterwood forest unit. The impact of this shift in approach cannot yet be determined.

Over time, the current situation will evolve on the French-Severn Forest. As an increasing proportion of the white pine stands receive their removal cuts, once renewal has been established, the revenue flowing to the FRT from these harvests will greatly exceed the associated costs of the harvest. Thus, perhaps in 5 – 10 years, the balance of revenues and expenses going into and out of the Renewal Trust will be positive. In the meantime, the Company needs to develop a strategy that will enable it to renew pine under current shelterwood harvests.

While this is a concern, the fact that shelterwood seed harvests leave a considerable canopy of white pine, which is a very long lived species, means that renewal failures can still be rectified in the future without having the stand convert to hardwoods. Thus, the current funding crunch is viewed by the Audit Team as a significant concern, but not as something that compromises sustainability of the forest. In fact, the treatment of white pine backlog that the Company has been undertaking during the audit period has increased the area of pine renewal, and so been supportive of gradually increasing the pine component.

The second concern that the Audit Team has voiced in this report is that the level of actual harvesting is well below planned levels. However, given the character of the French-Severn Forest, this is not seen as a threat to ecological sustainability. The tolerant hardwood stands that are not harvested will remain all-age tolerant hardwoods, and may improve their proportion of higher quality timber over time. Pine stands that do not receive their initial harvest can also be left for some time, although once the initial shelterwood harvest has been undertaken, the Company is virtually committed to ensuring that the procession of harvest entries is followed. Other types of stands, such as hemlock, cedar, larch, and lowland species, will also maintain themselves over long periods of time, as will black spruce and to a lesser extent, white spruce. The area of mature jack pine has been greatly reduced by the recent jack pine budworm infestation, leaving perhaps the intolerant hardwood stands as the species groups that are most negatively impacted by low harvest levels. However, the market for intolerant hardwoods is perhaps the strongest market for any timber species at present, and so it is anticipated that harvesting in these forest units will continue to rise. In other words, persistently low harvest levels should not lead to substantial shifts in species composition in the short to medium term.

However, should the actual harvest volume continue to decline, there could be problems with the economic sustainability of management. However, the factors that have contributed to the decline in harvest are outside of the Company's control, such as rising

energy prices, the US-Canadian dollar exchange rate, the declining use of newsprint and fine paper in North America, the trade restrictions on softwood lumber exports to the US, and intense international competition.

Given these challenges, the Audit Team feels that the proactive and assertive approach taken by Westwind, and strongly supported by the District MNR, has been effective.

The Audit Team's conclusions regarding sustainability have attempted to take several factors into account. Portions of the reviews in Sections 3.7.1 – 3.7.3 contribute to the assessment, but not all aspects of these sections are equally relevant. In addition to the information presented in the above sections, the Audit Team draws heavily upon the following to base its conclusions regarding sustainability:

- Adherence to the required forest management guides and manuals;
- Adherence to the conditions of the SFL;
- The existence of a functional and committed LCC;
- There is no overharvesting on the Forest, judging from the available data and observations made during our site inspection;
- The fulfillment of the goals and objectives of the 1999 FMP (with the caveat that some of the non-quantitative objectives were difficult to assess);
- The existence and implementation of well-considered AOC prescriptions which protect the non-timber values of the forest;
- The good relations that the Company has with many of the stakeholders on the Forest, and with the District MNR staff; and
- The very high level of commitment and professionalism demonstrated by the Company and its staff.

Based on the above considerations and the material reviewed throughout this audit, we conclude that the French-Severn Forest was managed within the bounds of sustainability during the term of the audit.

3.8 Contractual Obligations

This section of the report discusses how well the Company met its various contractual obligations, as stipulated in the SFL and legislation.

3.8.1 Payment of Crown Timber Charges

One key overlapping licensee has run into financial difficulty and has been behind on its Crown dues payments for at least two years, as well as its other Crown payments as is discussed below. MNR's approach has been to permit deferrals by Companies that are experiencing financial difficulties due to the adverse industry conditions, and it is anticipated that these deferred payments will eventually be made. The licensee in question has paid some of the deferred amount over the past year.

3.8.2 Forestry Renewal Trust

During the audit period, the minimum required balance in the FRT was in place on March 31 of the first three years of the audit period, but not during the final two years – 2005 and 2006. As discussed above, this is due to the delay in receiving payment from

one key overlapping licensee who ran into financial difficulty. Recommendation # 20 in section 3.4.3 is intended to mitigate the negative impacts of the deferred payments on Westwind's renewal trust account.

A draft report of the specified procedures review was reviewed. This review examined FRT work and invoicing for the 2005/06 fiscal year. The review found that there was a $38,073 difference between the total annual invoice amount of $1,229,778 and supporting invoices and schedules which totaled $1,229,705. The difference was found to be mainly due to invoices included that were outside the reporting period, some minor clerical errors, and an invoice that should have gone to the Forestry Futures Trust being misdirected. These errors are minor in nature and not due to any systematic problem.

3.8.3 Wood Supply Commitments

There are three wood supply commitments that apply to the French-Severn Forest. Two of them are with Tembec, which is the major overlapping licensee on the Forest. One of these is a commitment to make available 40,000 m^3/yr of tolerant hardwood sawlogs to the Huntsville mill, and the second is to make 33,000 m^3/yr of tolerant hardwood pulp logs available to the Temiskaming mill in Quebec. During the first four years of the audit period, the average volume shipped to Huntsville was 26,500 m^3/yr, or two-thirds of the commitment level. Tolerant hardwood shipments to Temiskaming averaged 25,600 m^3/yr, or 80% of the commitment. Volumes to both mills were quite low in 2001/02, and picked up thereafter. Tembec staff indicated that they were generally pleased with the relationship that they have with Westwind as a source of supply.

The third commitment was to make available 20,000 m^3/yr of non-veneer poplar to Grant Forest Products at Englehart. During the first four years of the audit period, an average of only 2,863 m^3/yr, or 14% of the commitment, was shipped to Grant. Westwind has been negotiating a memorandum of agreement (MOA) with Grant Forest Products to facilitate the Ministerial commitment since 1998. The previous IFA directed a recommendation towards Westwind to finalize an agreement with Grant. Grant and Westwind have been negotiating throughout the audit period and seem to have recently reached agreement on a key contentious issue that was an obstacle to agreement being reached. This should facilitate the companies' ability to reach agreement. The Audit Team believe that Westwind has been active in maintaining negotiations and so met the intent of the previous IFA recommendation; a further recommendation is issued as a marker on this issue.

Recommendation # 24

That Westwind continue to negotiate with Grant Forest Products with the aim of concluding a Memorandum of Agreement to make available poplar as per the terms in Appendix E of the Westwind SFL.

3.8.4 Monitoring Obligations

During the first four years of the audit period, free-to-grow (FTG) assessments were conducted on 21,537 ha, excluding areas harvested under the selection system, which are automatically and immediately considered FTG. This area is well above the area

harvested by non-selection methods during the 1994-99 plan period (11,288 ha) as well as the analogous area from the 1999-2004 FMP period (7,430 ha).

Of the area that was assessed, roughly 50%, or 10,609 ha, was considered to meet the FTG standards. The majority of the areas that did not meet FTG standards required tending, and this corresponded to the impressions of the Audit Team that many sites in the field required tending, especially under the pine shelterwood management. The Company is fully aware of this situation and has been trying to keep up with the current harvest and renewal of pine. There is also a considerable area of backlog pine that the Company was treating under Forestry Futures Funding, but anywhere from 8,000 – 14,000 ha remain that need treatment.

3.8.5 Treatment of X, Y, and Z Lands

Westwind has progressed with its survey of, and work on X, Y and Z lands but as discussed in the Silviculture section, their responsibilities are not nearly completed. Part of the reason for the slow down in work has been a lack of sufficient funding to do more than basic silviculture.

3.8.6 Previous Independent Forest Audit

The previous IFA for the French-Severn Forest was done in 2001. An action plan was developed to respond to the IFA's recommendations and suggestions. A status report was also prepared prior to this Audit. Generally, Westwind and MNR have acted to meet these recommendations, although in some cases there is additional effort required to complete the intent of the recommendation.

Table 11. Review of the implementation status of recommendations made in the 2001 French-Severn Independent Forest Audit.

Recommendation	Action Plan Response	Status
1. Westwind must ensure that the next Forest Management Plan includes quantified targets associated with management alternatives wherever possible.	Westwind will ensure that all appropriate targets for FMP-13 are documented in the FMP. Furthermore, the plan author for the 2004-2024 FMP will ensure that the FMP planning team reviews, and modify where necessary, all objectives and consider appropriate targets where possible. More quantifiable targets have been set in the 2004 FMP.	There is a good number of five-year targets associated with most objectives. Recommendation has been closed.
2. Westwind must run the Strategic Forest Management Model for the next Forest Management Plan using historical utilization levels to provide a comparison to a full harvest allocation scenario.	Westwind will review utilization levels for the last five years and conduct a SFMM scenario that would assume the AHA would be at these levels. A scenario where the planned harvest was 57% of allowable, for the first 20 years, was run and reported in Section 4.7 and Appendix 18 (Part 2) of the 2004 FMP. A review of the sustainability implications found none, and the 20-year harvest reduction had little impact on meeting objectives.	The 2004 FMP contains a description of a SFMM run that probably wasn't quite what the IFA auditors envisaged (they may have wanted to see a reduced harvest simulated for the full analysis period), but provided a general result. The analysis did not affect plan direction. Recommendation has been closed.
3. MNR in consultation with Westwind and the forest industry, must improve operational planning and continue to streamline the amendment process in order to further minimize operational delays.	These problems have been particularly evident in the mapping and allocation component of the current FMP, so particular attention will be directed to these arenas. MNR and the SFL will develop a strategy to ensure timely approval of amendment requests. The strategy will speak to timelines, appointment of reviewers and alternates, a reminder process, and minimum standards for application content. As of July 2002, MNR has implemented an improved amendment process. Agreement was reached with LCC to categorize amendments.	Presently, delays in amendment approval are mainly due to the difficulty lining up a qualified reviewer within the 15-day time frame or incomplete information in the amendment request. Start of 15-day limit is when a complete amendment request is received by MNR. Progress has been made in meeting the intent of this recommendation.
4. Westwind must classify allocated, unutilized stands and develop a strategy for treating and tracking these stands silviculturally, operationally and in the inventory.	Westwind will develop a strategy to address the under-utilization of allocated areas at the classification level. While this will have minimal impacts in increased utilization, it will address the three main reasons (combinations of why stands are not harvested: 1) economic inoperability due to low value/low volume of material, 2) access constraints, and 3) harvest scheduling issues. The strategy will also address landbase definitions for areas where it is known that the	Westwind has developed and implemented a multi-prong strategy for 2002/03. The 2004 FMPM shifts some of the lower quality tolerant hardwood stands into the shelterwood category, revises the marking prescriptions for thin soiled hardwood sites, and white pine will now be managed on a three-cut cycle.

Recommendation	Action Plan Response	Status
	likelihood of utilization is very low. Within each category, the silvicultural options and opportunities will be explored.	Forestry Futures Funding is being used for stand improvement work. The 2004 FMPM does not require that by-pass be reported in the ARs. Recommendation has been closed..
5. Westwind must ensure that the next Forest Management Plan includes a detailed road use management strategy for all primary and secondary roads required during the plan term.	Westwind and MNR and will establish a Partnership Agreement to establish common objectives for the partnership and the preparation of road use strategies. The local strategy will be consistent with the direction of the provinciai initiative and will involve consultation with the Local Citizen's Advisory Committee and local affected stakeholders. As part of the strategy, Westwind and Parry Sound District MNR will review the current Forest Management Plan to confirm the adequacy of existing roads and road use/abandonment documentation. If it is apparent that meaningful improvements could be made to substantially enhance the FMP, the plan will be amended accordingly. Draft Road Use Strategy has been completed July 2002.	MNR and Westwind began a district road strategy but discontinued discussions as new provincial direction and the new FMP Manual have changed requirements. There are few primary roads in this forest and no secondary roads. The FMP identifies access strategies (open to the public or gated/signed for access restrictions) for each primary road. The 2004 FMP Manual has substantial changes to requirements for road planning that includes all roads including operational roads and assigns responsibility for each road system. Work on the 2009 FMP has already begun with most efforts aimed at completing the new requirements for road inventories and related assignments of responsibility. Both planning and field staff from MNR and the SFL have been working on this initiative during the spring of 2006.
6. MNR, Westwind and the overlapping licence holders must continue to meet to review the application of forestry practices in the field.	MNR, the Company and operators meet each spring and fall to discuss compliance and other operational issues. These meetings have continued. One common compliance issue that did arise related to improper documentation in load haul tickets, and was discussed as a group at formal Operator Meeting. Tembec, MNR and Westwind meet weekly or bi-weekly to discuss operational issues or potential issues when Tembec is harvesting within the French/Severn Forest.	Recommendation has been closed.

Recommendation	Action Plan Response	Status
7. MNR and Westwind must ensure that the Annual Reports are accurate and include all forest management activities carried out during the reporting term.	MNR will make arrangements to revise and correct the Annual Reports as outlined on page 18 of the audit by September 2002. Spring 2002 reports are complete and accurate. Bracebridge AR 96/97, which contained some gross errors, was corrected.	No subsequent errors of any consequence – closed pending no issues during AR review in this audit. Recommendation has been closed.
8. MNR and Westwind must ensure that the Report of Past Forest Operations is completed in accordance with the requirements of the FMPM, is consistent with the Annual Reports and that any discrepancies are rationalized in the text.	The 94-99 RPFO was corrected by MNR (in October 2002 ?). There was no next RPFO, since reporting requirements changed with the 2004 FMPM. Westwind completed a ten-year AR for the 2003-04 year and it has been accepted by MNR.	The 10-year AR (2003-04) was completed according to FMPM requirements – closed pending no issues during AR review in this audit. Recommendation has been closed.
9. MNR (Forest Management Branch) must change Table 7 in the Forest Manager's Report so that it refers to both even- and uneven-aged management, thereby providing a more complete status report of renewal on the entire forest.	Table 7 in the Forest Manager's Report was revised in the 2002 Independent Forest Audit Process and Protocol to show even and uneven-aged renewal assessment results.	Recommendation has been closed.
10. Westwind must implement the Data Management Strategy no later than May 1, 2002 to determine the status and sustainability of the white pine forest unit.	Westwind established a Data Management Strategy which will determine the status of the forest condition, the effectiveness of silvicultural treatments and the need for and type of remedial action which may be required. The strategy involves regeneration assessments, free to grow surveys and silvicultural effectiveness monitoring. Westwind will take steps to implement the strategy at a rate appropriate to the resources required and available and the priority for the information. Priority will be given to the White Pine and Red Pine Forest Units. Westwind has initiated the data management strategy on	Data Management Strategy has been developed and is being implemented. Recommendation has been closed.

Recommendation	Action Plan Response	Status
	May 01, 2002 and successfully completed an unprecedented level of surveys in white pine shelterwood stands in 2002 and 2003.	
11. Westwind must finalize a Memorandum of Agreement with Grant Forest Products Inc. for the provision of poplar as per the terms outlined in Appendix "E" of the Sustainable Forest Licence for the French-Severn Forest.	Westwind and Grant have held numerous meetings and produced a variety of draft MOU's, but there has been no agreement reached. The issue concerns the inclusion of a must-sell clause – Grant feels it must have this clause in an MOA but operators will not sell to Grant at a loss.	The Company made substantial efforts to conclude an MOA with Grant but there has been no final agreement. A new recommendation has been issued in this IFA to support the continuation of negotiations.

3.8.7 Licence Conditions

There are three special conditions listed in Appendix F of the Westwind SFL. The Company has satisfied all of these.

The first condition requires the Company to provide operators listed in the approved Company business plan the opportunity to harvest timber, under the terms of a Memorandum of Agreement. All of the initial operators on the forest were listed in the original business plan, and the Company has tracked the changes that have occurred since 1997/98. All operators are required to sign MOAs in order to conduct operations on the French-Severn Forest.

The second condition is that the Company will make available roughly 2,000 m^3 of commercial fuelwood each year, in blocks of up to 150 m^3, on a Commercial Fuelwood Permitting System, each requiring an MOA with Westwind and an overlapping licence from MNR. The third condition is that Westwind will maintain annual records of the permits.

These conditions have also been met. The 2003/04 AR reports that 67,033 m^3 of commercial fuelwood was harvested during the five year period of the 1999 FMP, while Table AR-5 of the 2004/05 AR shows a commercial fuelwood harvest of 12,120 m^3. A commercial fuelwood licence agreement is in place between the operator and Westwind, and the operator also holds an OLL with MNR.

3.8.8 Licence Extension

The SFL for the French-Severn Forest stipulates that there will be a periodic review of the Company's compliance with the terms and conditions of the licence for the period April 1, 2001 to March 31, 3006, according to the regulation governing Independent Forest Audits (Reg 160/04).

The IFA report is required to make a recommendation concerning licence extension, and the Audit Team finds that, during the audit period, the Company has been in substantial compliance with the licence, relevant laws and regulations, the 1999 and 2004 FMP's, and the 1996 and 2004 FMPMs. As discussed in section 3.7.4, the Audit Team has concluded that the French-Severn Forest is being managed within the bounds of sustainability and therefore is pleased to recommend that the Minister should extend the term of the SFL for an additional five-year period.

Recommendation # 25

That the Minister of Natural Resources extend the term of Sustainable Forest Licence #542411, held by Westwind Forest Stewardship Inc for the French-Severn Forest, for an additional five=year period.

4 SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

This audit reviewed the management of the French-Severn Forest for the period April 1, 2001 to March 31, 2006. The review included examination of the content of the 1999 FMP and the 2004 FMP, review of the process of development of the 2004 FMP, and implementation of management of the Forest for the last three years of the term of the 1999 FMP and the first two years of the term of the 2004 FMP.

This audit makes 25 recommendations (one of which is to extend the licence) and six suggestions (Table 12) and identifies two best practices. This is a favourable audit, and while there are key challenges to managing the French-Severn Forest, the Company, with strong support from the MNR, has done well in the circumstances. Although not all recommendations and suggestions are of equal import, an examination of where they occur in this audit report provides a good depiction of the Audit Team's impressions of management of the Forest. Of the 25 recommendations, five related to plan implementation - the Audit Team had a favourable impression of the field operations inspected but difficulties funding the renewal program were also discussed under this principle. This was the key issue identified in this audit. Similarly, the fact that thirteen of the recommendations, and three suggestions, related to the planning principle of the IFAPP reveals that the Audit Team believes that there are a number of opportunities for improvement in aspects of planning for the Forest. Four of the recommendations came under the Public Participation Principle, and three of these were designed to improve interactions with First Nations. It is noted that most of the First Nations have other priorities other than forestry, and that personnel changes in the MNR and the First Nations have impeded the development of an on-going dialogue.

Some of the key aspects of forest management which feature prominently in this audit are reviewed below.

Low Level of Actual Harvest compared to Planned

The actual harvest area was 38% of the planned level during the 1999 FMP period, down from 46% in the previous period. The harvest level approached 50% of average planned levels during the first two years of the 2004 FMP, but the Trend Analysis cautions that market and weather conditions were favourable those years, and the level of harvesting was expected to average less during the course of the full plan period.

The key reasons for this situation are an abundance of low quality timber in many stands, due to past high grading practices, and poor markets and low prices for low quality timber. This means that harvesting in many stands is economically marginal, and results in a low level of utilization.

The key impacts of this are that the outcomes that are anticipated from following the management plan will not be achieved if this situation persists, and there is also no opportunity to improve the quality of the stands by harvesting the low-grade material. Reducing the planned level of harvest would also provide opportunities to enhance other values in the forest, providing a greater stream of benefits to the public.

In response, the Company has reduced the number of planned white pine shelterwood harvest entries from four to either three or two, and moved approximately 10,000 ha of

tolerant hardwood area out of the selection-based forest units into the shelterwood forest unit. These moves should lead to somewhat higher harvesting and mitigate the renewal funding issue discussed next.

Insufficient Revenue for Forest Renewal Trust to fund Desired Silvicultural Program

Management of the white pine sites on the French-Severn Forest is challenging, because many are rocky and thin soiled, yet they also support vigourous hardwood competition. This translates into a requirement for expensive measures to renew pine. However, the volume yielded per harvest entry into the pine stands is low, meaning that in the early stages of harvesting, harvests contribute less revenue to the Forest Renewal Trust than the silvicultural cost requirements, and there is no additional Trust revenue generated from other forest units. The low harvest levels discussed above do not help this situation. As a result, the Forest Renewal Trust is unable to adequately fund the desired level of silviculture, placing the successful regeneration of pine at risk on some sites.

During the audit period, the Forest Renewal Trust buffer was reduced and the financial managers were quite successful in generating investment revenue from the Trust balance. The buffer has now been eliminated, and investment returns have declined. Part of the reason for the latter is that the Trust is below its minimum required balance because one key overlapping licensee has been permitted by MNR to fall behind in its payments, which reduced the Trust balance by as much as $400,000 at one point during the audit period.

Higher than Anticipated Levels of Backlog

The French-Severn Forest was formerly managed by the Ministry of Natural Resources as two separate management units, the Bracebridge and Georgian Bay Crown Management Units. When these were amalgamated and the French-Severn Forest was created, part of the agreement to transfer management of the Forest to Westwind Forest Stewardship Inc included payments to Westwind to enable it to provide appropriate silviculture on sites that had been harvested prior to the transfer. It has become evident that the amount of backlog was significantly greater than anticipated, and the condition of renewal on it was poorer than expected. The Company has been able to secure Forestry Futures funding to enable it to treat some of the additional backlog, but the Company estimates that there is from 8,000 to 14,000 ha of backlog remaining. Because Forestry Futures funds up to 80% of these treatments, on-going treatment of backlog has proven to be a further burden on the Forest Renewal Trust. This audit is recommending that MNR and the Company evaluate the extent of remaining backlog, and its treatment requirements, and negotiate a payment from MNR that would enable the Company to fully treat the additional backlog on the Forest.

While there are management challenges on this forest, the Company has also continued to innovate in a number of areas. These include undertaking a wide range of outreach activities, developing a well-written and informative 2004 Forest Management Plan, and becoming certified under the Forest Stewardship Council. District MNR has been very supportive of these efforts, and as a result, a best practice was awarded.

The Audit Team has concluded that during the term of the audit period, the French-Severn Forest was:

- managed in general conformance with all legal requirements, including MNR policies and regulations;
- managed in conformance with the terms of the Sustainable Forest Licence;
- managed generally according the 1999 and 2004 FMP, with the exception of the low harvest rates relative to planned levels;
- and managed within the general bounds of sustainability.

The Audit Team recommends that the Minister of Natural Resources extend the term of Sustainable Forest Licence #542411, held by Westwind Forest Stewardship Inc for the French-Severn Forest, for an additional five-year period.

Table 12. Summary of Recommendations, Suggestions and Best Practices.

Principle: Commitment
Best Practice: 1. The Company, with strong support from District MNR, has demonstrated a very high level of commitment to forest management, and has proven to be innovative and proactive in a number of areas, including accessing funding, enhancing public awareness, and engaging stakeholders and the general public.
Principle: Public Participation
Suggestions: 1. The LCC Terms of Reference should set a target for a minimum number of meetings to be held each calendar year. 2. In order to communicate more effectively with First Nations, the standard MNR notices and invitations could be augmented by the publication of a more reader-friendly ad. **Recommendations:** 1. That MNR ensure that the Terms of Reference for the 2009 FMP include a protocol for retaining planning records and documents. 2. That the MNR post public notices in local Aboriginal media. 3. That the MNR re-engage the First Nations to evaluate their interest in establishing a regular dialogue on forestry opportunities and other forest issues, such as updating Native Values Maps. 4. That the MNR ensure that all First Nations communities who use or have interests on the French Severn Forest are sent public notices for any aerial herbicide spraying.
Principle: Forest Management Planning
Best Practice: 2. Westwind made exceptional efforts at public outreach during the development of the 2004 FMP, including the Forest Management Update pamphlet produced in advance of the Second Information Centre.

Suggestions:

3. The planning team for the 2009 FMP should implement measures to document Information Centre attendance of its members.

4. Westwind and the associated MITIG staff should arrange to meet with the management staff of Nipissing Forest to review Nipissing's silvicultural tracking and inventory update system.

5. The MNR District Manager should consider delegating the authority to sign administrative amendments and AWS revisions to the Area Supervisor.

Recommendations:

5. That the planning team for the 2009 FMP develop strategies to ensure that public correspondence is answered in as timely a manner as possible.

6. That Westwind secure a new FRI coverage as soon as possible.

7. That the Company correct the errors in Table FMP-13 of the 2004 FMP and submit an amendment consisting of the corrected table.

8. That the Planning Team for the 2009 FMP set a credible, achievable planned level of harvest on the French-Severn Forest.

9. That the MNR and the Company develop and implement a strategy to bring the planned levels of harvest on the French-Severn Forest into greater consistency with expected levels of utilization.

10. That the Planning Team for the next FMP continue to encourage innovative tactics which incorporate current silviculture, harvesting, and economic thinking when developing Forest Units, Silviculture Ground Rules and Treatment Packages (and appropriately match them to forest stands).

11. That Corporate MNR provide values funding sufficient to collect information for the entire year's allocations on an annual basis.

12. That MNR provide training on deer-yard management in the French Severn Forest for Westwind staff and operators, and that the training provide opportunities for discussion of the merits of the selected approaches.

13. That Corporate and/or Regional MNR provide direction to MNR District staff regarding the prioritization and implementation of road and crossing management efforts related to implementation of the Forest Roads and Water Crossings Initiative.

14. That the Planning Team for the 2009 FMP, with the assistance of Corporate MNR and MNR Region, should develop local interpretations of the requirements of the Natural Disturbance Pattern Emulation Guide, suitable for use in the Great Lakes-St. Lawrence silviculture practiced on the Forest.

15. That the Company institute measures to ensure that signed and sealed copies of approved FMP amendments and AWS revisions are filed in its office promptly following their approval.

16. That the Company update its FMP amendment summary to include request and approval dates, and better descriptions of the reasons for amendments.

Principle: Plan Implementation

Recommendations:

17. That Corporate MNR review the prescribed burn cost formula with the intent of increasing the fairness of the formula by reducing some of the charges and facilitating greater use of prescribed burning for silvicultural purposes.

18. That MNR and the Company evaluate the extent of remaining backlog, and its treatment requirements, and negotiate a payment from MNR that would enable the Company to fully treat the additional backlog on the Forest.

19. That Westwind and MNR develop a strategy to manage or alleviate anticipated shortfalls in funds available for stand improvement, silviculture and tending without sacrificing strategic direction.

20. That Corporate MNR take appropriate measures to mitigate the negative impact of deferred payments to the French-Severn Renewal Trust Fund.

21. Corporate MNR, on a provincial scale, review its policy and legislation to ensure the wise use and management of Crown forest access roads and trails by the growing community of off-road vehicle users. In the interim, Bracebridge and Parry Sound MNR offices should work with off-road vehicle user-groups under existing policy and legislation to control and manage the use of Crown forest access roads and trails.

Principle: Systems Support

Recommendation:

22. That Corporate MNR and Westwind jointly develop a strategy to bring overlapping licensees on the French-Severn Forest into compliance with the amended Bill C-45 and any other relevant health and safety legislation.

Principle: Monitoring

Suggestion:

6. MNR Region, MNR District and Westwind should make it a priority to refine and install a system to efficiently and accurately complete and report Silviculture Effectiveness Monitoring.

Recommendation:

23. That the Company formally document the analysis of compliance priorities and meet the content requirements of the Monitoring Inspection Reporting Schedule in future Annual Forest Compliance Plans.

Principle: Sustainability

No suggestions or recommendations.

Principle: Contractual Obligations
Recommendations: 24. That Westwind continue to negotiate with Grant Forest Products with the aim of concluding a Memorandum of Agreement to make available poplar as per the terms in Appendix E of the Westwind SFL. 25. That the Minister of Natural Resources extend the term of Sustainable Forest Licence #542411, held by Westwind Forest Stewardship Inc for the French-Severn Forest, for an additional five-year period.

Appendix A: Comparison and Trend Analysis of Planned Versus Actual Forest Operations Reports for the French-Severn Forest

The Comparison and Trend Analysis Report which follows as Appendix A was produced by Westwind Forest Stewardship Inc. Although the Report was reviewed by the Audit Team, the Audit Team had no role in writing it.

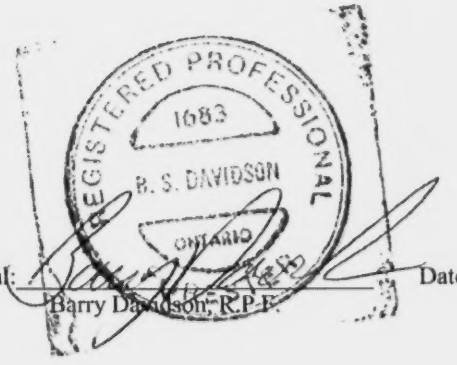
French Severn Forest – Management Unit 360

Independent Forest Audit - 2006

Forest Manager's Report

July 2006

Prepared by: Barry Davidson, Westwind Forest Stewardship



RPF Signature and Seal: _____ Date: July 25/06

Barry Davidson, R.P.F.

Comparison and Trend Analysis of Planned vs Actual Forest Operations

Executive Summary

There were no new significant trends in the 2001 to 2006 period from planned vs actual forest operations from the 1996 to 2001 audit period. The level of utilization of harvest area and volume remain quite low due to poor markets for poor quality stands. The management unit continues to be a sawlog driven forest economy with maple and white pine sawlogs being the main operable products. Byproducts from these stands, (for example species and product mixes of hardwood pulpwood, poplar pulpwood, balsam fir, and beech sawlogs) are of low value and the harvesting and transporting costs normally exceed revenues obtained from their sale. The proportion of quality sawlogs to pulpwood quality material generally determines the feasibility of the harvest. This proportion changes depending on the market conditions for any given year and by the access costs for any given harvesting block but the trend continues to be a truism.

The most significant change in landbase between the two audit periods is the land withdrawals for Ontario's Living Legacy that are reflected in the 2004 FMP but not the 1999 FMP. Over 40,000 ha of production forest was designated as new parks, park expansions and mainly Conservation Reserves.

Issues remain similar between audit periods. The challenges associated with white pine management in relation to regeneration continue to dominate many of the forest management discussions. Extensive vegetation management efforts have certainly helped but new insight has been made in terms of the need to do removal cuts sooner to release regeneration from low shade. The cost of pine silviculture continues to be a concern as the need for vegetation management has become even more clear on the majority of pine sites in this management unit yet the relatively low yield from the harvests provide less than ample renewal monies. This has become even more of an issue as Westwind has invested heavily, with major assistance from Forestry Futures projects, in bringing along white pine shelterwood "backlog" areas.

The focus of surveying has changed, especially for white pine shelterwood, as the MNR (at the regional level) and SFLs are working at making silvicultural standards and surveying methodologies more meaningful in these partial harvest systems. Furthermore, during this audit period, first removal cuts in managed pine shelterwood stands have been done for the first time in this forest. Training needs to deal with careful logging and identifying expected damage to regeneration have taken precedence over efforts to declare understory pine free-to-grow.

Introduction

This Forest Manager's Report was prepared in accordance with the Independent Forest Audit Protocol Appendix C to the greatest extent possible given the information available to complete the report, in particular the associated tables. The audit period of 2001 to 2006 includes 2001/02, 2002/03, 2003/04, 2004/05 and 2005/06. However, because this audit is occurring prior to the annual report date of November 15, 2006, data is only available for the first four years of the audit period.

The audit period transcends the Forest Management Plans 1999 to 2019 and 2004 to 2024. Both of these plans were prepared under the guidance of the 1996 Forest Management Planning Manual for Ontario's Crown Forests. Some information, however, was obtained from the fall annual report for 2004/05 and the Ten Year Report that were prepared under the 2004 version of the planning manual.

There is more consistency between this IFA report and that for the 2001 audit as there were no management unit amalgamations or management unit boundary changes. However, some information is necessarily required for a few of the tables in this report that was obtained from the 1994 to 1999 FMP period wherein there were two separate plans; one for the Bracebridge Crown Management Unit and one for the Parry Sound Crown Management Unit. Some of the tables that

required linking of forest units between plans were completed with less certainty in this regard because of the that period with separate plans.

This report is structured to discuss each of the seven tables individually.

Table 1 – Summary of Total Area Under Management

Table 1 Supplement should be viewed in conjunction with Table 1 as it provides for a cross reference for working group associations between current and past plans.

Between the 1994-99 and 1999-04 management plans, Baxter Township was declared as being outside of the Area of the Undertaking. This resulted in a reduction of area during the development of the 1999 plan. This reduction does not appear to be significant in the total Production Forest summary in Table 1. This is partly due to some reclassification of Site Class 4 and non-forested land (mainly "Rock") as actually being declared productive forest in the 1999 FMP.

The amount of NSR, depleted stands and B&S remain relatively unchanged between plan terms. This is primarily due to the extremely small amount of clearcutting that takes place as partial cutting seldom if ever results in NSR or B&S categorized stands. Much of this area is the result of jack pine salvage clearcuts from the 1990s, most of which will be classified as production forest young stands in the 2009 FMP.

The most significant change in this table, and the most relevant between the two auditing periods is the difference in figures between the 1999-04 and the 2004-09 management plans. The amount of managed production forest fell by approximately 47,572 ha. Ninety percent (90%) of this reduction can be attributed to Ontario's Living Legacy in which approximately 70% of the new protected areas in Southern Region were identified in the French/Severn Forest. This resulted in a total of over 23% of the Crown forested land in this forest being occupied by protected areas in the form of parks or Conservation Reserves. Table 4 will show a reduction in annual allowable harvest area of 1000 ha, which, given the complexities of the Strategic Forest Management Model, cannot be definitely attributed to this landbase reduction but it is likely that this landbase withdrawal was a significant contributor to the lower allowable harvest area.

There was an attempt made during the development of the 2004 management plan to net down the landbase by removing from Crown Managed production forest stands with significant logistical access challenges that would undoubtedly limit any harvesting opportunities. These areas were categorized as types of bypass and show up in the "non-managed" forest classification.

The Ontario Living Legacy certainly also had a tremendous impact on non-forested, non-productive and protection forest areas. Most notably, the Great Lakes Heritage Coast was a very large land withdrawal that was comprised of thousands of hectares of non-forested, non-productive and site class 4 lands.

The amount of water was reduced to less than half of the 1999 plan figures. This has no impact on forest management activities so the reasons are not terribly important. However, although some was included in the Ontario Living Legacy withdrawals, much had to do with the district boundary mapping in Georgian Bay that now includes less of the water.

There is an increase of approximately 6,000 ha in federal lands from 1999 to 2004. This is largely due to negotiations between the Ontario government and the Wahta First Nation community in which there was an addition to the reserve lands. This 6,000 or so hectares covers non-forested land, productive forest land and non-productive forest.

The 57 new Conservation Reserves and 8 new parks or park additions were the driving factors between the 1999 and 2004 in terms of Crown managed landbase.

Table 2 Description of Forest Units

Table 2 is a version of FMP-8 from the 2004 management plan that endeavours to align with forest units from previous plans. Although this was very difficult for some forest units (e.g. SF1 – spruce fir clearcut), the mainstay of forest units were quite consistent between the 1999 and 2004 FMPs. Namely, PWUS (white pine shelterwood, although this was modelled as a 4-cut shelterwood in the 1999 plan and a 3-cut in the 2004 plan), HDSBB (selection forest unit on the east side of the management unit), HDSGB (selection forest unit on the west side of the management unit) and HDUS (tolerant hardwood shelterwood) matched up quite closely.

The main discrepancy in these forest units was that in the 1999 plan, PQHUS was a pine/oak complex that came out of a ecotype classification exercise. On the ground, these stands tended to be pine areas with separate patches of oak or vice-versa, instead of a true pine-oak mix. In the development of the 2004 FMP, this forest unit was dropped with some area moving to PWUS or HDUS or OR1 forest units.

PWUS2 and MWUS are 2-cut shelterwood forest units with PWUS2 being comprised of low stocked white pine stands or red pine stands (including red pine plantations formally classified as CM2cc clearcut stands). MWUS stands are conifer shelterwood stands with white spruce being a more prominent species. In the 1999 plan, CM2us covered most of these stands.

Although there were close relationships between the tolerant hardwood forest units of the 2004 plan (HDSBB, HDSGB and HDUS) and the 1999 plan, and even the 1994 plan, the criteria changed significantly when forest units were assigned. This is more evident in Table 5, however, in summary, much more area was classified in the 2004 plan as being hardwood shelterwood and less area as being selection. This was particularly true of the Georgian Bay hardwoods where quality is much lower in these stands due to site and history.

Table 3 - Summary of Planned and Actual Harvest Volumes

Table 3 shows some differences between species groups in the 1994 plan and the other two plans. During the 1994 plan period much of the volume information was grouped as PWPR instead of separated as white pine and red pine. The same can be said for Po/Bw, which was later separated as poplar white birch. This was rationalized in the 2001 Forest Managers Report.

It is critical to note that the values for the 2004-09 plan were only available for the first year of the plan. Because the utilization level of harvest area (and therefore volume) varies widely from year to year (as much as by 100%), the value for 2004-09 is misleading. During that year, there was a major amount of harvesting effort placed on white pine stands. This was partially due to Fryer Forest Products focussing on harvesting much of its French/Severn allocations during this first year of the plan. It was also a tremendous year for hardwood pulp markets so that utilization levels increased in hardwood pulp stands making more stands financially operable. There was also a much higher than normal amount of poplar and white birch harvested that year. Domtar was interested in obtaining this material from the French/Severn due to the fact this is FSC certified fibre. The end result is that the annualized volume for this period was based on a "good year" or a "high harvest year" with an overall volume utilization level of 60%. The other plan periods represents an average condition of a combination of "good and bad years" and of fluctuating markets. The overall utilization level was therefore less.

The planned harvest level was reduced overall in the 2004 plan from the 1999 plan as well as the 1994 plan. It is difficult with SFMM derived allowable harvest areas and volumes to determine why any particular fluctuation takes place due to the hundreds of variables the model must address. However, certainly the reduction in Crown managed landbase as discussed relative to Table 1 would be a significant factor.

Surprisingly, the planned volume for white pine increased from the 1999 plan even with the area withdrawals. There are three possible and likely reasons for this. First, the 2004 main pine forest unit is a 3-cut forest unit instead of a 4-cut, thereby making more volume available per cut. Second, regional analysts made suggestions to change growth and yield curves of the PWUS forest unit that resulted in a greater pine yield. Thirdly, the modelling in the SFMM for changes of harvest levels between terms was very tight in the 1999 plan whereas in the 2004 plan, these constraints were lessened to the level suggested by regional planning analysts.

The 1994 planned levels were calculated with entirely different and simple calculations than used in the 1999 and 2004 plans with SFMM. Volumes were also not estimated with anything like the variables considered by SFMM in calculating yields.

The utilization levels of the harvest volumes shown in the graph is the primary subject of analysis for Table 3. Utilization levels continue to fluctuate in the 40-50% average annualized range with the 60% for 2004 representing only one good year as already discussed. The reasons behind these utilization factors remain as being:

1) reduced economic certainties with low yielding partial cut systems,
2) lack of local large mills that provide a continued stable market,
3) weather related harvest restrictions, particularly in partial cutting systems where root and stem damage to residual trees is of extreme concern to forest managers,
4) long transportation distances to pulp mills which is even a more important factor with high fuel costs,
5) poor, expensive access for many allocations that are not economically feasible in many market conditions,
6) even during good hardwood pulp markets, economics of that material by itself is marginal at best with the sawlog component still driving the harvest,
7) partial cutting systems and tree marking that prevent night-time harvests,
8) low yielding clearcut stands with much of the material, such as poplar, having high cull values,
9) softwood lumber tariff that affected white and red pine eventually,
10) availability of contractors with cut and skid crews still in place and the utilization of mechanized harvesting being only a recent development in this forest, and
11) an abundance of private land (approximately 50% of the forest is on patent land) that can prove more lucrative without the abundance of regulatory controls present on Crown.

What is particularly evident from Table 3 is the reduction in volume harvested between the 1994-99 and 1999 to 2004. The overall average annual harvest volume decrease is from 190,200m3 to only 138,600m3. Certainly, the factors listed above contributed to this reduction. Of those, factors, weather stands out as being the major factor. Wet falls of 1999 and 2001, coupled with late winters and early springs resulted in very short harvesting seasons. New rutting standards and additional attention to the Protection of the Physical Environment Guidelines prevented operations from occurring where they may have previously been allowed to continue to operate.

Stumpage rates are certainly another factor that contributed to the reduction. With the creation of SFLs , and the Special Purpose Accounts, stumpage rates would have a net increase in this forest on average. This makes Crown wood less attractive then before these rates increased.

FSC certification of a large publicly owned Canadian forest was first achieved in 2002 on the French/Severn Forest. It was, and is, hoped that this certification will increase the demand for forest products coming from this forest. Although this was directly observed in some instances such as from the Domtar and Temiskaming pulp mills, this increased market is outweighed by closer forests achieving similar certification thus providing lower cost fibre. Many mills have not pursued chain of custody certification to take advantage of the FSC

wood and other markets have not materialized, at least not in a way to overcome the pressures listed above.

Table 4 – Summary of Planned and Actual Harvest Areas.

The analysis of the Table 4 results in observations mostly already discussed in this report. A reduction in landbase certainly contributed to a significant reduction in annual allowable harvest area of 1,000 ha.

The AHA for selection forest units (HDSBB and HDSGB) was further reduced as much of the area in these forest units was moved to HDUS (hardwood shelterwood). This was due to greater experience working in these stands and observing, for instance, that very, very few HDSGB (selection stands in the western portion of the management unit) ended up being adequate for selection management upon site inspection. Many stands in the eastern portion of the management unit, where site and history there contribute to generally much better quality and better stocked hardwood stands, also proved unsuitable for selection management.

This shift to hardwood shelterwood can be attributed to:

1) recognizing site limitations for selection stands,
2) stands previously cut with selection cut too heavy (for instance Minister direction in late 1980s to mark all merchantable trees over a certain size or poorer quality stands being cut heavy to reduce as much poor quality trees as possible and to "get the regen going"),
3) recognizing that shelterwood system is a legitimate system for tolerant hardwood management, and
4) recognizing the importance of maintaining, and increasing where appropriate, the amount of midtolerant species (e.g. yellow birch, black cherry, white ash) through providing more light than afforded by single tree selection.

Note that a dramatic reduction in planned and actual harvest level took place in the jack pine dominated forest units between the 1999 plan and subsequent plans. Large scale salvage operations took place due to jack pine budworm infestations during the 1994 to 1999 plan period. This accelerated harvest greatly reduced the eligible jack pine stands. When eligible stands are encountered, stocking levels are often found to be very low, and often inoperable, due to the combination of poor site class and the legacy of jack pine budworm.

The differences in harvest levels associated with MWUS and PWUS2 are the result of very poor alignments with past forest units as previously discussed.

Planned harvest levels between the 1999 and 2004 plans for intolerant hardwoods (INT), hemlock (HE1), oak (OR1), lowland forest (LWMW) (AHA kept purposefully low due to site sensitivity), and jack pine (PJ1) have remained relatively constant and all are fairly minor components of the overall planned harvest areas.

The reasons that can be put forward for low utilization level of the planned harvest area, and the variations between management plan terms have already been stated in the analysis of Table 3 for low utilization levels of the planned harvest volume.

Table 5 Summary of managed Crown Productive Forest by Forest Unit

This table is a copy of FMP-9 from the 2004 and 1999 FMPs. There is no meaningful comparative table from the 1994 FMP. This was discussed during the 2001 Audit and the audit team agreed that there was little point trying to manufacture a table for the 1990 and 1994 Timber Management Plans that would endeavour to provide information similar to that provided in 1999.

Comparisons of this table between terms would be focussed on:

1) total amount of available production forest area by forest unit,
2) age class structure of each forest unit
3) stage of management breakdown by each forest unit, and
4) any changes in unavailable and protection forest.

1) Total amount of available production forest area by forest unit has already been discussed with the following main points of interest:
   i) the total amount available has been reduced in the 2004 plan due to land withdrawals, mainly because of Ontario's Living Legacy, and
   ii) there has been a shift of more hardwood shelterwood (HDUS) stands and less selection (HDSBB and particularly HDSGB) stands.
2) The age class structure by forest unit has not changed substantively. Except for FRI updates, of which there have been few, shifts to older age classes can only happen as stands age which over a 5-year period is minimal. Shifts to younger age classes are much more common in most management units as stands are clearcut or are depleted by natural disturbances such as fire. Stand replacing disturbance events are extremely rare in this forest and clearcuts account for an extremely small amount of harvesting. Final removal cuts would also result in younger stands but given the management stages of most shelterwood stands, few true final removal cuts have occurred in this timeframe.
3) Stage of management breakdown by forest unit is generally a gradual shift in shelterwood stands with those stands harvested in the 1999 to 2004 FMP under a seeding cut then becoming a first or final removal cut in the 2004 to 2009 FMP. These shifts are gradual but are reflected in larger amounts of HDUS and PWUS removal cut stages. During the first year of the 2004 plan, the first managed first removal cuts occurred in PWUS pine stands in this forest. These will then show as final removal cut stands in the 2009 FMP.

   One obvious difference is that the PWUS and HE1 shelterwood stands are now 3-cut shelterwood systems with no preparatory cut being planned. Given the small size and low utilization level of HE1, this is most noteworthy for the PWUS forest unit. So few stands slated for receiving a prepatory cut were actually encountered that required such a cut, that this stage of management was dropped. Instead, however, commercial thinning is now a possibility with PWUS stands.

4) Reductions in protection forest occurred in the 2004 plan mainly due to Ontario Living Legacy land withdrawals. The amount of unavailable production forest area increased, however, as discussed previously under Table 1 discussions. Essentially, an attempt was made to net down the landbase to remove those stands that were extremely unlikely to be operable for reasons of access and isolated patches in poor access areas such as 30 ha of site class 3 poplar several hundred meters from a road surrounded by hundreds of acres of site class 4 and non-forested areas.

Table 6 – Summary Report of Renewal, Tending and Protection Operations

The low levels of achievement shown in Table 6 relative to planned vs actual silvicultural operations is reflective of the low harvest levels (i.e. if stands are not harvested they are not eligible for renewal or tending). This link is especially true in selection stands as the selection harvest itself is the renewal treatment. Because stand improvement is done in selection stands, these selection harvests are also uneven-aged spacing/improvement cutting tending treatments. In addition to the selection harvests, polewood thinning is added in these maple stands to arrive at the final figure for uneven-aged tending.

Natural regeneration is less clear with regards to even-aged stands. Areas may initially left for natural but follow-up treatments may occur later if natural renewal is not successful. Areas may also have been left for natural regeneration initially and reported as such but then switched to a more intensive form of management. For example, a mixedwood stand may have been harvested and left to regenerate back to mainly poplar and white birch. This would have been reported as such. Funding and/or planting stock may have become available in a year or two and then the area may have been planted to spruce. This may still occur, even with the requirement for Forest Operation Prescriptions.

Still, clearcuts are mainly mixedwood and intolerant stands left to regenerate to intolerant stands. This is in keeping with management plan objectives to create more early successional forest which is lacking on the management unit as age class structures are generally skewed to the older ages.

White pine shelterwood stands left for natural regeneration are a lot less certain. Surveys have shown that silvicultural success is only achieved on the very shallow sites or where significant soil disturbance was achieved through logging,and poor success in most stands left for natural. Timing seeding cuts and site preparation with good seed years is uncertain at best and usually not practical and far from guaranteed. An advanced level of mechanical site preparation occurred in 2000 when a very good seed year for white pine was expected. However, extremely droughty conditions in 2001 saw tremendous amounts of mortality in those young seedlings. Less area is therefore planned for this treatment now than in past plans such as in the 1994 plan, and artificial regeneration has increased tremendously in recent years.

Tolerant hardwood shelterwood stands are almost all scheduled for natural regeneration, except those being converted to conifers or oak. Success is basically guaranteed with hardwood regeneration already present. Surveys of these stands are almost redundant.

Less artificial regeneration has occurred recently in clearcut situations. SFMM modelling in both the 1999 and 2004 plans recommended that all clearcuts be left for natural regeneration.

Site preparation has been shown to be a very important element of white pine shelterwood regeneration efforts. Observations and following study areas such as the Mowat Trials, have shown that chemical site preparation is more I effective than mechanical site preparation, especially since planting is expected to be the main regeneration method on most sites. Therefore, there has been a gradual but definite reduction in mechanical site preparation over the last few years and an increase in chemical site preparation followed by planting. Funding challenges through the RTF have made it difficult to treat all sites with this more intensive work. Although it is recognized that the combination of mechanical and chemical site preparation followed by planting and then chemical tending is the optimum treatment package, enough revenues are simply not generated through the harvests on these comparatively low yielding pine stands.

Although it is a small item, local forest managers recognize the potential and benefits of the use of prescribed fire, particularly in managing red oak as well as white pine, but high costs, planning

requirements, uncertainty of implementing the treatments, and insurance requirements continue to make this a virtually unusable tool even though management plans identify the importance.

The use of brush saws or manual tending has been greatly reduced. High costs, high labour demands, and ineffective results have combined to identify that there are only few cases where this treatment is justifiable. The use of aerial chemical tending in white pine shelterwood stands began with a small project in 1999, peaked in the years 2000 to 2002 and has declined since then. Much of the work was on Class y and z lands with the assistance of Forestry Futures monies but significant expenditures of RTF funds were required as well. Almost every single pine survey has shown that vegetation management is required, with some of the areas having been treated with brush saws one to two times.

Spacing of uneven-aged stands has already been discussed. Spacing of even-aged stands has mainly been in red pine plantations. Forestry Future projects have been important in achieving much of this work as the red pine has been low yielding and of very small size due to most stands being only 25 to 35 years old. One contractor has been successful in marketing this small size material, otherwise most of the work would have been pre-commercial instead of "quasi-commercial" in nature.

Most pest management activities took place in the 1994 to 1999 planning period and were related to jack pine budworm with harvesting being a primary tool; also significant spraying did occur as well. For the term of this audit period, no insect pest control occurred. A few small salvage operations in localized blowdowns occurred.

Table 7 – Harvested Area Successfully Regenerated

Table 7 identifies Harvest Area for the years 1991 to 1996 along with the corresponding area from this harvest period that has been surveyed to report on the total area successfully regenerated. The period 1991-1996 was used in consideration of a standard 10 year regeneration delay (back from 2006 to 1996) and including 5 years preceding. These harvest activities and initial renewal efforts (mostly notably in the clearcut and shelterwood areas) were conducted by the MNR on the former Crown Management Units (Parry Sound and Bracebridge). A significant portion of these areas would be considered "backlog" stands for which Westwind is not legally responsible for meeting current regeneration standards.

Note that area not available for regeneration was calculated by taking 5% from the total area harvested for roads and landings.

Total Area Harvested under Even-aged Management (clearcut and shelterwood) for this period was 14275 ha, comprised of 2215 ha clearcut, 7594 shelterwood seed cut, 2382 ha shelterwood removal cuts and 2084 in preparatory cuts. Preparatory cuts are not considered available for regeneration and are thus excluded from the remainder of Table 7.

Deriving the figures for this table proved a challenge. For instance, the period of harvest overlaps two planning terms (1990-1994 and 1994-1999 TMP's) in two former Crown Management Units (Parry Sound and Bracebridge), of which Parry Sound was previously split into 2 Management Units for the period of 1990-1994. In addition, past reports (RPFO's, AR's) did not report the assessment of regeneration success by year of harvest. In addition, survey results for this period of harvest have not been captured within current electronic databases so query summaries were difficult to complete.

Sources of information used for Table 7 include depletion records, survey records, treatment prescriptions, tending records, RPFO's and AR's. The figures include area that has not been reported in previous annual reports. For example, both formal and informal surveys and

walkthroughs took place by Westwind in thousands of hectares of backlog white pine stands to identify suitable areas for treatment. More formalized survey results have been reported in annual reports but informal surveys to identify and schedule a treatment on stands that do not meet regeneration standards were likely not reported on.

The category ***Total Area Surveyed For Regeneration Success*** in Table 7 for Evenaged Management includes 675 ha of clearcuts, 3886 ha of conifer shelterwood seed cuts, and 2937 ha of conifer and hardwood shelterwood removal cuts. For Even Aged Management, 18588 ha harvested under the Tolerant Hardwood Selection System were considered surveyed.

During tree marking operations for tolerant hardwood selection stands or shelterwood removal cuts, certified tree markers in essence "survey" stands as they mark, and determine the appropriate level of stand structure to leave behind. The stand structure left behind or not marked to remove during harvest, is sufficient in nature that upon completion of harvest, these stands are considered Free to Grow. In addition, marking for removal in shelterwood stands should only occur if regeneration of sufficient size and quantity exists under the overstory being considered for removal. This condition also results in FTG status upon harvest completion.

Of the 3886 ha of shelterwood seeding cuts reported as surveyed but not declared Free to Grow (see discussion below), a significant proportion of these stands have received follow-up tending or supplementary regeneration, primarily under the Forestry Futures Trust program. Many of these stands now need an additional survey to assess the success of the treatments.

Of the 2215 ha of clearcuts harvested in the period 1991 to 1996, 675 ha have been surveyed and declared FTG. The remaining clearcuts for the report period not declared successful are reported under B&S in Table 7. Clearcuts were not given a priority for surveying given other challenges primarily with renewal efforts in white pine stands. Most clearcuts are assumed to be sufficiently regenerated, either through natural (ie. poplar) or through artificial means (ie. mainly jack pine aerial seeding on rocky sites). Recent efforts in 2005 and 2006, however, have focused on confirming these stands as FTG, although the results will be formally reported in future annual reports.

Total Unsurveyed Area in Table 7 is comprised of 1540 ha of clearcut, 2413 ha of conifer shelterwood seed cut and 1295 ha of hardwood shelterwood seed cut that have not been surveyed.

During the transition years between Crown Management Unit to SFL (1997- 1999), levels of surveying for regeneration success were relatively low. Prior to this and during the years of management under Crown Management Units, stand assessments and timber cruising had been a lower priority than many other activities.

It soon became apparent to Westwind that a significant amount of area, especially under white pine shelterwood management, was suffering from heavy competition and in many instances insufficient stocking levels. With over 20,000 ha of backlog "class z" conifer shelterwood and conifer clearcuts to deal with, it was a daunting task to tackle the surveying of these stands. However, during the periods of primarily 2000 to 2003, Westwind made considerable efforts to survey primarily white pine shelterwood stands, completing over 12,000 ha on what would be considered backlog stands.

Unfortunately, survey results in white pine shelterwood stands have identified that a great deal of area could not be declared successfully regenerated or Free to Grow, despite initial efforts of carrying out seeding cuts and some sort of regeneration effort (natural or artificial). In almost all cases, regeneration in these areas is suffering from competing vegetation and needs a treatment (primarily chemical) and in many cases requires supplemental planting. These areas do not show as NSR or Barren and Scattered in the FRI because there is still a mature overstory which is reflected in the FRI description. The result is that provincial B&S surveys do not include these

as backlog areas although the effect is similar to a clearcut, i.e. not satisfactorily regenerated stands negatively affect harvest levels and creates delays in scheduling stands for the next harvest. It was deemed prudent however, to show 2413 ha of conifer shelterwood seeding cut harvest and 1295 ha of hardwood seeding cut harvest that was not surveyed as NSR in Table 7, despite the fact a mature overstorey has been maintained in these stands.

In the case of hardwood shelterwood seeding cuts, it is expected that the stands have regenerated naturally, however no formal surveys have been carried out to substantiate this. Instead, post seeding cut conditions often have sufficient regeneration already established. Stand inspections of stands within only a few years of such cuts also indicate abundant hardwood regeneration even if it was not immediately present when the seeding cut was carried out.

Westwind created an ambitious data collection strategy several years ago to use as a framework to guide assessment work in the management unit. In recent years the level of surveying of older backlog stands has been curtailed, in part due to budgetary constraints and as Westwind focuses its efforts on recent cutovers that have SFL obligations. The requirement to conduct Silviculture Effectiveness Monitoring (SEM) audits in selection stands has added additional workload. There has also been the lack of an available and skilled workforce to carry out these assessments (the majority of the workforce is needed to focus on tree marking).

In addition, there has also been a significant amount of discussion in the last year amongst SFL's, local MNR Districts and Science and Tech regarding the appropriate survey methodologies and strategies that should be used to meet SEM requirements for (primarily) even-aged conifer clearcut and shelterwood stands. There are ongoing discussions regarding competition rules and stocking standards, height to declare FTG, effects of overstorey shading on regeneration, effect of removal cut harvests on stocking levels and available growing space on regeneration.

It is anticipated that development of the 2009-2019 FMP will result in significant changes to regeneration standards, strategies to assess regeneration success and renewal/tending area and cost estimates, in part based on what has been learned from assessments to date and from the results of these ongoing discussions.

Although there has been less assessment of backlog sites in recent years, Westwind will continue efforts to survey these sites but will place strategic emphasis on areas such as those that have received tending or supplementary planting treatments. A plan is in place to assess remaining clearcut stands that require a FTG survey and new stand description in order to bring these back into the inventory. Additional efforts will be required in the area of assessment of hardwood shelterwood seeding cuts to assess regeneration. Meeting these requirements as well as the requirement to conduct SEM assessments in selection stands will continue to be a significant challenge for Westwind's resources.

General Comments

The purpose of regeneration assessments is threefold. First, they identify areas that can be declared free-to-grow to be entered back into the landbase for the purpose of contributing to allowable harvest area or to determine if an area is ready for its next shelterwood treatment. Second, they identify requirements for additional silvicultural treatments such as tending. Thirdly, they allow forest managers to assess which silvicultural treatment packages are effective. Some general statements can be made from previous formal and informal assessments.

Single tree selection and uniform shelterwood in tolerant hardwood stands consistently result in successful regeneration of desired species (ie. hard maple) in silvicultural ground rules. While specific objectives for some shelterwood stands are to increase the proportion of mid-tolerants such as yellow birch or red oak in a stand, hard maple is still considered a desirable species in those ground rules. Regardless of how effective the treatment was to increase the yellow birch or

red oak (or other individual species), tolerant hardwoods are regenerated as anticipated and desired.

A significant amount of area in removal cuts has been harvested in which regeneration is expected, otherwise the removal cut should not have occurred. While there may be some instances where a first removal cut might occur prior to regeneration reaching FTG status, they should be rare. The graphs include removal cuts to give an overall picture of the harvest vs. survey/FTG declaration comparison.

Similarly, clearcutting of intolerant hardwood stands (poplar and/or white birch) is an effective treatment to achieve successful regeneration of those species through natural regeneration. Poplar in particular is highly successful through vegetative reproduction methods.

The most significant regeneration concern is the lack of success to date in achieving free to grow status in white pine shelterwood stands. It is recognized that mechanical site preparation a year or two in advance of a good white pine seed year is important to secure significant quantities of seedlings through natural regeneration. An ongoing challenge is to carry out mechanical site preparation in winter only access areas. Failure to undertake the mechanical site preparation defaults to either planting or natural regeneration on very shallow sites that do not require (and physically cannot be) mechanically site prepared. Traditionally, natural regeneration has been used and unfortunately, many of the sites have significant areas of rich and/or deep soils and poor regeneration efforts have been the result. Therefore, future management must make greater efforts to use silvicultural treatment packages to address these sites.

Note that Westwind's philosophy on site preparation techniques is changing, with a greater emphasis on chemical site preparation and higher density planting, as opposed to timing mechanical site preparation to good seed years which have inherent scheduling and budgetary challenges in implementing. Movement towards chemical treatments as the preferred site prep method is based in part on the results of assessments which show poor results without early control of competing vegetation, as well as years of research by MNR Science and Tech and other institutions through various vegetation management trials, including those in the French/Severn forest.

The second most significant concern is the ability of established regeneration to persist in the understory of a shelterwood stand. Marking philosophy over the years has varied. Some of the older seeding cuts were heavier than might now be prescribed but many have been lighter (i.e. higher crown closure left). It is generally accepted that mid-tolerant white pine requires approximately 50% full sunlight to achieve maximum growth. Overstory spacing of less than full crown spacing (half crown spacing, as is normally now prescribed as per the GLSL Silvicultural Guide for Conifers, does not provide close to the 50% sunlight). However, of more significance is the low light conditions created by the combination of overstory and understory competition. The presence of pervasive excessive understory competition is common in stands assessed. Therefore, aggressive stand tending projects (usually using chemicals) are required to create more favorable conditions in the understory. Overstory targets need to be investigated to determine possible changes to seeding cut crown closure targets and/or timing of removal cuts. The status of white pine regeneration resulting from past harvests may likely result in new assumptions for future plan development in modeling for the determination of available harvest area. This may result in a reduction in allowable harvest levels for white pine shelterwood areas. However, on a positive note, a number of stands that were marked to quite high crown closure targets retained adequate stocking to justify a second seeding cut. This would essentially treat the previous recorded "seeding cut" as a preparatory cut.

In the current 2004-2009 FMP, first removal harvests are taking place primarily in backlog sites to give release to the regeneration that is present (many of these sites were tended under the FFT program since Westwind's inception). A long-term strategy for these backlog sites will likely

continue to involve implementing a first removal cut to release existing regeneration. A post harvest survey would then be completed to assess the need for supplementary treatments.

Achievements – FMP Objectives

- Regeneration to Pw in the former Bracebridge MU: general practices showed early success, however there are serious concerns about how much Pw regeneration will be lost to Pw blister rust. There is little to prevent this from occurring so other desirable species such as Sw and Pr are often regenerated along with Pw.

- Poplar clearcut/ hardwood uniform shelterwood are extremely effective in regenerating respective species through natural methods.

- Pw shelterwood stands which predominate in the western portion of the management unit are of greater concern. On dry shallow sites, natural regeneration is reasonable. On deeper soils, natural regeneration relies on soil disturbance and a good seed year. Artificial regeneration on these richer sites is often carried out. Many efforts to secure regeneration either artificially or naturally have met with moderate to good success. However, vegetative competition threatens the vigour, health and survival of this regeneration. Regeneration difficulties are often related to winter cuts, remote access and limited funds. Reasons for limited tending include the focus on easy access sites and limited funds. Past reliance solely on brushsaw treatments which have not been effective has also resulted in limited regeneration success. However current treatments include the increased use of chemicals including ABS spraying, aerial application, brushsaw chemical applicators and basal bark treatments.

- Successful regeneration has occurred in clearcuts (Bf/Po mixedwood stands) to Pw, Pr and Sw through the use of mechanical site preparation, chemical site preparation, planting and chemical tending. The key has been to apply the proper follow up treatments at the appropriate times.

- Future challenges for the MU are to follow up post harvest to establish and tend early to ensure successful regeneration efforts are achieved.

APPENDIX

Forest Managers Report Tables

2006 Independent Forest Audit

Table 1 - Summary of Total Area Under Management

Past and Current Plans - Crown Managed

MU: 360 French Severn Forest

	Area in hectares		
	Past Plans		Current
Land Class	1994-99	1999-04	2004-2009
Water	293,309	289,530	120,042
Non-Forested	4,442	33,229	8,283
Forested			
Non-productive	149,418	119,743	70,534
Protection Forest	62,861	59,461	33,397
Production Forest			
Depleted/B&S / NSR*	24,580	7,744	7,809
Working Group			
Pw	66,238	66,583	61,699
Pr	2,297	2,355	2,250
Pj	7,274	7,370	5,548
S	8,756	7,733	6,730
B	15,600	15,567	13,404
By	5,092	5,640	5,032
C	4,318	4,032	2,836
He	14,865	15,495	13,355
Po	29,878	32,839	25,430
Bw	9,290	10,132	8,209
Mh	147,702	157,064	150,026
H	25,932	24,960	15,424
Total Production Forest	361,822	357,515	309,943
Total Forested Land	574,101	536,720	413,874

*Includes "Production Forest Reserve" category from 94-99 TMP

Source: Table TMP - 4.8.2
FMP - 1 and 2

2006 Independent Forest Audit

Table 1 Supplement:

French Severn Breakdown of Working Groups:

Working Group	04-09	99-04	94-99	
			GB	BB
Pw	"	"	"	"
Pr	"	"	"	"
Pj	"	"	"	"
S	Sb, Sw, Ss	Sb, Sw, Ss	Sb, Sw	Sb, Sw
B	"	"	"	"
By	"	"	"	"
C	Ce, La	Ce, La	Ce, La	OC, PS
He	"	"	"	"
Po	"	"	"	"
Bw	"	"	"	"
Mh	"	"	"	SL*
H	Ms, O, OH, A, CHB, Ma	Ms, O, OH, A, CHB, Ma	Ms, A, O, OH	A, BE, CHB, E, H, MS, O, MH

* Note that SL BB (90, 94 TMP) represents stands managed under the selection silviculture system, and is not limited to Mh leading species. However, Mh working group considered closest WG as a majority of SL area would have been Mh dominated forests.

2006 Independent Forest Audit
Table 2 DESCRIPTION OF FOREST UNITS

MU: French/Severn (360)

Forest Units										
2004 to 2009		1999 to 2004 FMP	Forest Unit		Forest Type	Main Working Group	Site Type(s)	Silvicultural System	FRI Parameters & Criteria	Additional Information
BB	GB		Code	Name						
THU	na	SelBB	HDSBB	Tolerant Hardwoods - Selection (Bracebridge)	Tolerant Hardwoods	MH	25, 26, 28, 29	Selection	Mh+Uh> 6 Site class 2 and better, low conifer, Some mix with hemlock (SFU include MHBE, some MHCON, some HE, THSL1, THSL2)	Roughly within the boundaries of the former Bracebridge MU, past selection cut history a factor in moving some stands to this FU
THP	THU	SelGB, LMSel	HDSGB	Tolerant Hardwoods - Selection (Georgian Bay)	Tolerant Hardwoods	MH	25, 26, 27, 28, 29 (23, 24, 30, 35)	Selection	Mh+Uh> 6 Site class 2 and better, low conifer, Some mix with hemlock (SFU include MHBE, some MHCON, some HE, THSL1, THSL2)	Roughly within the boundaries of the former Georgian Bay MU
THE	THE	HDUS	HDUS	Tolerant Hardwood - Shelterwood	Tolerant Hardwoods	MH/BY/MS	27, 29 (14, 17, 23, 24, 25, 26, 30)	Uniform Shelterwood 2 cut	MH+UH site class 3 or mix with non-hemlock conifers, or intolerants or MS/BY dominated (SFU include THUSG, MIDHD, BY, some MHCON)	Normally 2 cut but sometimes 3 cut shelterwood, average cut interval is 15 years
PW1	PW	PWUS	PWUS	3 cut white pine shelterwood	White Pine Dominated	PW	11, 14 (12, 13, 17,18, 20, 21)	Uniform Shelterwood - 3 cut	(PW+PR)*stk> 3 or shelterwood history in stands (SFU include PWUS4, pine dominant PWOR)	Number of cuts dependant upon stand conditions/age and history (some stockings lowered in inventory because of past cuts (some 3 some 4 cuts)
PB2	PW1	CM2us, CM2cc, F	PWUS2	2 cut pine shelterwood	White pine/ Red pine	PW or PR	11, 13, 14, 17 (12, 18 20, 21, 22, 27, 28, 29,	Uniform Shelterwood - 2 cut	Insufficient stocking to meet PWUS or red pine dominant (SFUs include PR1, PWUSH, PWUSC, PWST, some PWOR with lower pine)	Red pine Plantations included in this FU.
HE1	HE,HED	Heus	HE1	Hemlock shelterwood	Hemlock and hemlock mixed forest	HE	28, 30 (14, 23, 27, 35)	Uniform Shelterwood - 3 cut	Hemlock >=40% and MH and upland hardwoods <40% (SFUs include HE)	Where SFU=HE but >30% upland hardwoods on good sites or if past selection history, stand went to selection. Will be 3 or 4 cut.
THE	THE	PQHus, HDUS	OR1	Oak	Upland oak forest	Or	14, 23, 25 (17, 22, 24, 27, 28, 29, 30)	Uniform Shelterwood - 2 cut	Oak>=30% and Oak>=Mh+BE. (SFU include Oak)	2 cut or group shelterwood. Many sites will not have high stocking or good quality.
SW1	SW,B	CM2us	MWUS	Mixedwood shelterwood	White spruce mixedwoods	Sw	14, 18, 27, 29	Uniform Shelterwood - 2 cut	(Spruce + Pines) *stocking>=30% Spruce > pine (SFUs include SF2 and MW3)	Will be a 2 cut shelterwood
BF1	B	CM1cc	MWCC	Mixedwood clearcut	Mixed upland forests	BF, PO	17, 18, 22, 27 (14, 16, 20, 21, 28, 29 30, 32, 33, 34, 35)	Clearcut	Mixedwood stands without enough non-balsam fir conifers to make shelterwood or enough poplar/white birch to make FU=INT (SFU's include MW1, MW2)	
PB1,PB3	HD	PoMx2	INT	Intolerant Hardwoods	Intolerant Hardwood forest	PO, BW	17, 18 (11, 14, 16, 19, 21, 23, 27, 35)	Clearcut	Poplar + White Birch>50% of stand, mostly >60% of stand (SFUs include PO, BW, some others e.g. LWMW where Po+Bw where dominant)	
OC1	BOG	LC2cc	LWMW	Lowland Mixedwoods	Lowland forests including lowland conifers	SB, CE, AB	16, 33, 34, 35 (21, 22, 30, 31, 32)	Clearcut	Stands dominated by lowland species, both mixedwoods and pure lowland conifers. (SFUs include SB1, LC1, CE1, SBOG and LWMW)	Some sites will be made unavailable due to sensitive nature of sites.
SB	PJ	BoCcc	PJ1	Jack pine	Upland conifer	PJ	13, 15 (11, 19)	Clearcut	Jack pine >50% of the stand and (Pw+PR)<30%, Most jack pine>=70% (SFUs include PJ1, PJ2)	Many sites are on shallow soil and are low stocked, past budworm damage.
SB, SW2	B	BoCcc	SF1	Spruce Fir	Upland Conifer	BF, SB, SW	18, 22, 32, 33 (12, 16, 27, 29, 31, 34, 35)	Clearcut	Spruce and balsam fir and all other conifers>=70% of stand but low pine and hemlock. (SFU include SF1)	Balsam fir is working group most of time but spruce a significant species.

2006 Independent Forest Audit

Table 3 - Summary of Planned & Actual Harvest Volumes
MU: French Severn (360)

Average Planned Annual Harvest Volumes

Volumes are based on each plan period (annualized)

Species	*Volume in '000's cubic metres*		
	Past Plans		Current Plan
	94-99	99-04	04-09
Pw		58	64.8
Pr		8	8.2
Pw/Pr	78	-	-
Pj	3	6.2	5.6
Pine			
S	7	8.6	8
He	2	17.4	11
B		3.0	7.6
C	1	0.2	0
Po/Bw	11	-	
Po		29.8	25
Bw		9.8	8
H	253	201.4	186
Subtotal 90-94			
Total Planned Vol by Plan	354	342	324

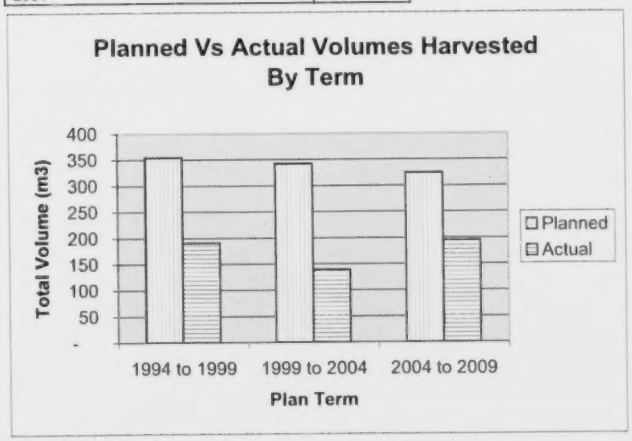
Actual TSBS Harvest Volumes

Volumes are based on each plan period

Species	*Volume in '000's cubic metres*		
	Past Plans		Current*
	94-99	99-04	04-09
Pw		37	72
Pr		10	8
Pw/Pr	60.0		
Pj	18.8	0	0
Pine			
S	4.0	4	3
He	0.8	2	1
B		0	0
C	0.4		-
Po/Bw	6.6		
Po		9	7
Bw		2	4
H	99.6	74	99
Total Actual Vol by Plan	190.2	138.6	194.8

* Volumes based on one year, 1st year of plan only.

Term	Planned	Actual	%
1994	354	190	54
1999	342	139	41
2004	324	195	60



Source: FMP-23 AR-3,5

2006 Independent Forest Audit

Table 3 - Summary of Planned & Actual Harvest Volumes

MU: French Severn (360)

Average Planned Annual Harvest Volumes

Volumes are based on each plan period

Species	*Volume in '000's cubic metres*		
	Past Plans		Current Plan
	94-99	99-04	04-09
Pw		289	324
Pr		38	41
Pw/Pr	388	-	-
Pj	15	31.0	28
Pine			
S	36	43.0	38
He	8	87.0	53
B		15.0	38
C	4	1.0	1
Po/Bw	54	-	
Po		149.0	125
Bw		49.0	40
H	1,265	1,007.0	931
Subtotal 90-94			
Total Planned Vol by Plan	1770	1709	1619

Actual TSBS Harvest Volumes

Volumes are based on each plan period

Species	*Volume in '000's cubic metres*		
	Past Plans		Current
	94-99	99-04	04-09
Pw		185	
Pr		52	
Pw/Pr	300.0		
Pj	94.0	1	
Pine			
S	20.0	19	
He	4.0	8	
B		1	
C	2.0	-	
Po/Bw	33.0		
Po		45	
Bw		11	
H	498.0	372	
Subtotal 90-94			
Total Actual Vol by Plan	951.0	692.8	

2006 Independent Forest Audit

Table 4 - Summary of Planned & Actual Harvest Area

Past and Current Plans

MU: French Severn

Area based on each plan period

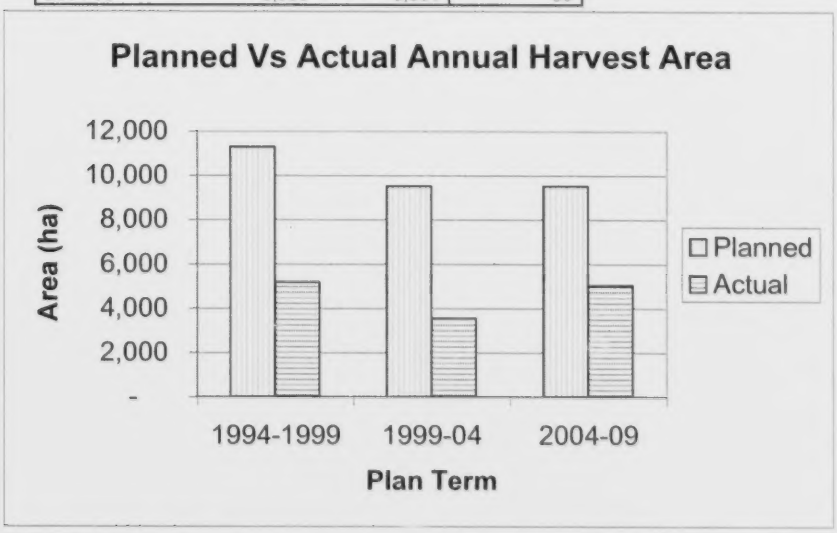
Planned Annual Harvest Area					Actual Harvest Area		
		Area in hectares			*Area in hectares*		
		Past Plans		Current	Past Plans		Current
*Forest Unit		94-99	99-04	04-09	94-99	99-04	04-09***
CM1cc	MWCC	122	191	116	16	15	-
CM2cc	PWUS2	-	38	653	2	16	270
BoCcc	PJ1	230	95	76	271	1	-
PoMx2	INT	612	290	247	49	70	3
CM2us	MWUS	549	180	71	255	99	-
Pwus	PWUS	1,700	1,650	1,373	1,274	887	1,302
Hdus	HDUS	1,007	540	1,180	354	368	514
Heus	HE1	260	120	98	28	3	-
LC2cc	LWMW	96	11	9	9	-	-
PQHus	OR1	-	110	91	-	27	-
LMSel	SF1	-	141	138	-	-	-
SelBB	HDSBB	4,217	4,119	3,515	2,305	1,860	2,790
SelGB	HDSGB	2,488	2,015	1,033	615	188	152
	Total Area:	11,281	9,500	8,599	5,177	3,534	5,031

** Where 94-99 and 99-04 Forest Units were split to recgonize minor components as in Table 2, planned/actual areas in this table are reported here based on the dominant Forest Unit

*** Current plan values based on only 1 year, first year of plan.

Planned vs. Actual Harvest Area

Term	Planned	Actual	%
1994-1999	11,281	5,177	46
1999-04	9,500	3,534	37
2004-09	9,500	5,031	53



Source: Table TMP - 4.15 Table TMP 4.1
FMP - 18 AR-1

2001 Independent Forest Audit

Table 4 - Summary of Planned & Actual Harvest Area

Past and Current Plans

MU: French Severn

Area based on each plan period

		Planned Annual Harvest Area			Actual Harvest Area		
		Area in hectares			*Area in hectares*		
		Past Plans		Current	Past Plans		Current
*Forest Unit		94-99	99-04	04-09	94-99	99-04	04-09*
CM1cc	MWCC	608	954	579	82	74	
CM2cc	PWUS2	-	190	3,265	8	81	
BoCcc	PJ1	1,152	477	380	1,355	6	
PoMx2	INT	3,062	1,448	1,236	243	352	
CM2us	MWUS	2,746	899	355	1,275	494	
Pwus	PWUS	8,499	8,250	6,864	6,371	4,435	
Hdus	HDUS	5,035	2,700	5,899	1,771	1,839	
Heus	HE1	1,300	600	489	138	15	
LC2cc	LWMW	479	55	43	45	-	
PQHus	OR1	**	550	455	**	134	
LMSel	SF1	**	706	692	**	*	
SelBB	HDSBB	21,087	20,596	17,577	11,523	9,300	
SelGB	HDSGB	12,438	10,076	5,163	3,076	940	
	Total Area:	56,406	47,500	42,997	25,887	17,670	

* See Table 2 - Description of Forest Units for information on 90-94 and 94-99 TMP Forest Units

** Where 94-99 and 99-04 Forest Units were split to recgonize minor components as in Table 2, planned/actual areas in this table are reported here based on the dominant Forest Unit

Planned vs. Actual Harvest Area

Table 5 Summary of Managed Productive Forest by Forest Unit.

FMP-9 from the 1999 to 2019 FMP has been scanned into a Word document (it was created with FARM)
Information not available in any meaningful way for the 1994 to 1999 FMPs
MANAGEMENT UNIT NAME: French/Severn Forest
PLAN TERM: April 1, 2004 to March 31, 2009

FMP-9 SUMMARY OF MANAGED CROWN PRODUCTIVE FOREST BY FOREST UNIT

Forest Unit	Age Class	Stage of Management	Protection Forest		Production Forest			
					Unavailable		Available	
			Ha	m^3	Ha	m^3	Ha	m^3
HDSBB	1-999	SLCT	14	1638	58	6786	82360	9601956
Subtotal			**14**	**1638**	**58**	**6786**	**82360**	**9601956**
HDSGB	1-999	SLCT	28	2268	1777	143937	31258	2512377
Subtotal			**28**	**2268**	**1777**	**143937**	**31258**	**2512377**
HDUS	0	SCUT	0	0	0	0	238	0
HDUS	1-20	SCUT	0	0	6	0	295	0
HDUS	21-40	SCUT	0	0	0	0	393	1108
HDUS	41-60	SCUT	0	0	0	0	208	6816
HDUS	61-80	SCUT	92	6894	180	12625	6618	473999
HDUS	81-100	LCUT	0	0	0	0	430	24897
HDUS	81-100	SCUT	356	37057	714	71834	11265	1139114
HDUS	101-120	LCUT	0	0	0	0	2675	170977
HDUS	101-120	SCUT	405	47883	543	64278	5394	637371
HDUS	121-140	LCUT	0	0	0	0	4395	271007
HDUS	121-140	SCUT	536	60534	295	33625	6940	782540
HDUS	141-160	LCUT	0	0	0	0	1050	61910
HDUS	141-160	SCUT	123	13092	60	6415	1675	178528
HDUS	161-180	LCUT	0	0	0	0	2815	162989
HDUS	161-180	SCUT	0	0	30	3150	4391	461055
HDUS	181-200	LCUT	0	0	0	0	400	23040
HDUS	181-200	SCUT	0	0	0	0	1256	130624
HDUS	201+	SCUT	5	520	0	0	85	8840
Subtotal			**1517**	**165980**	**1828**	**191927**	**50523**	**4534814**
HE1	0	SCUT	0	0	0	0	1	1
HE1	1-20	SCUT	0	0	0	0	1	0
HE1	61-80	SCUT	0	0	0	0	521	39882
HE1	81-100	FCUT	0	0	0	0	30	2610
HE1	81-100	SCUT	10	1150	0	0	834	91702
HE1	101-120	FCUT	0	0	0	0	50	4830
HE1	101-120	SCUT	25	3250	0	0	1038	133115
HE1	121-140	FCUT	0	0	0	0	20	2011
HE1	121-140	LCUT	0	0	0	0	30	1679
HE1	121-140	SCUT	55	7260	4	528	1823	239790
HE1	141-160	FCUT	0	0	0	0	220	21964
HE1	141-160	LCUT	0	0	0	0	15	841
HE1	141-160	SCUT	13	1677	0	0	1260	164166
HE1	161-180	SCUT	42	5334	1	127	765	97155
HE1	181-200	SCUT	0	0	0	0	487	61362
HE1	201+	SCUT	112	13965	0	0	762	94748
Subtotal			**257**	**32636**	**5**	**655**	**7857**	**955857**
INT	0	NA	0	0	0	0	1681	0
INT	1-20	NA	32	0	4	0	1838	0
INT	21-40	NA	1	4	0	0	203	1271
INT	41-60	NA	680	40120	0	0	579	33963
INT	61-80	NA	4253	339877	738	59895	8154	661977
INT	81-100	NA	10270	962668	1711	158712	12143	1135928
INT	101-120	NA	2957	284541	763	73978	2714	259034
INT	121-140	NA	68	2857	0	0	96	5730

INT	141-160	NA	0	0	0	0	14	448
INT	161-180	NA	3	81	0	0	58	1566
Subtotal			**18264**	**1630148**	**3216**	**292585**	**27480**	**2099917**
LWMW	0	NA	0	0	0	0	711	0
LWMW	1-20	NA	0	0	10	0	703	0
LWMW	21-40	NA	0	0	0	0	11	11
LWMW	41-60	NA	0	0	17	561	71	1693
LWMW	61-80	NA	0	0	0	0	534	31708
LWMW	81-100	NA	72	5616	17	1491	1997	172761
LWMW	101-120	NA	44	4488	7	686	1533	153438
LWMW	121-140	NA	0	0	17	1615	894	84124
LWMW	141-160	NA	0	0	0	0	460	39442
LWMW	161-180	NA	5	420	4	336	338	28218
LWMW	181-200	NA	0	0	0	0	15	1185
Subtotal			**121**	**10524**	**72**	**4689**	**7267**	**512580**
MWCC	0	NA	0	0	0	0	4	0
MWCC	1-20	NA	0	0	0	0	4	0
MWCC	21-40	NA	0	0	0	0	41	246
MWCC	41-60	NA	0	0	0	0	218	10720
MWCC	61-80	NA	575	43565	22	1738	1401	104844
MWCC	81-100	NA	597	56403	44	4312	4557	433274
MWCC	101-120	NA	255	26580	16	1680	1390	144660
MWCC	121-140	NA	142	10105	0	0	760	58919
MWCC	141-160	NA	31	1773	0	0	124	7192
MWCC	161-180	NA	0	0	0	0	219	11562
MWCC	201+	NA	0	0	0	0	14	700
Subtotal			**1600**	**138426**	**82**	**7730**	**8732**	**772117**
MWUS	0	SCUT	0	0	0	0	225	0
MWUS	1-20	SCUT	0	0	0	0	636	0
MWUS	21-40	SCUT	0	0	0	0	59	236
MWUS	41-60	SCUT	21	1134	0	0	56	1946
MWUS	61-80	LCUT	0	0	0	0	15	834
MWUS	61-80	SCUT	65	5866	0	0	1168	102953
MWUS	81-100	LCUT	0	0	0	0	90	6496
MWUS	81-100	SCUT	54	6696	41	5084	2310	270228
MWUS	101-120	LCUT	0	0	0	0	115	9627
MWUS	101-120	SCUT	2	266	9	1197	1199	160561
MWUS	121-140	LCUT	0	0	0	0	100	8020
MWUS	121-140	SCUT	11	1386	20	2280	610	74352
MWUS	141-160	SCUT	25	2675	0	0	92	9775
MWUS	161-180	LCUT	0	0	0	0	5	354
MWUS	161-180	SCUT	44	4532	0	0	146	15002
MWUS	181-200	SCUT	0	0	0	0	19	1862
Subtotal			**222**	**22555**	**70**	**8561**	**6845**	**662246**
OR1	0	SCUT	0	0	0	0	56	0
OR1	1-20	SCUT	0	0	0	0	51	0
OR1	21-40	SCUT	0	0	0	0	4	4
OR1	41-60	SCUT	0	0	0	0	13	507
OR1	61-80	SCUT	0	0	0	0	660	48388
OR1	81-100	SCUT	439	46040	206	21836	1783	177818
OR1	101-120	LCUT	0	0	0	0	20	1610
OR1	101-120	SCUT	511	59674	11	1309	2116	248104
OR1	121-140	LCUT	0	0	0	0	80	6432
OR1	121-140	SCUT	712	82364	0	0	1011	116858
OR1	141-160	SCUT	109	12207	0	0	173	19260
OR1	161-180	SCUT	0	0	0	0	75	8250
OR1	181-200	SCUT	0	0	0	0	3	330
OR1	201+	SCUT	0	0	0	0	21	2310

Subtotal			**1771**	**200285**	**217**	**23145**	**6066**	**629871**
PJ1	0	NA	0	0	0	0	1902	0
PJ1	1-20	NA	1	0	0	0	1902	0
PJ1	21-40	NA	0	0	0	0	62	310
PJ1	41-60	NA	110	5765	105	5775	12	525
PJ1	61-80	NA	248	17992	0	0	1146	81620
PJ1	81-100	NA	2409	195476	611	49952	1986	160296
PJ1	101-120	NA	1462	119654	422	35026	854	67993
Subtotal			**4230**	**338887**	**1138**	**90753**	**7864**	**310744**
PWUS	0	THNC	0	0	0	0	36	0
PWUS	1-20	THNC	0	0	0	0	36	0
PWUS	21-40	THNC	0	0	0	0	58	815
PWUS	41-60	THNC	2	157	0	0	0	0
PWUS	61-80	THNC	41	5133	19	2379	3840	475394
PWUS	81-100	FCUT	0	0	0	0	7600	569859
PWUS	81-100	LCUT	0	0	0	0	1000	44738
PWUS	81-100	SCUT	84	13314	49	7601	3811	594014
PWUS	101-120	FCUT	0	0	0	0	13000	1130623
PWUS	101-120	LCUT	0	0	0	0	900	44696
PWUS	101-120	SCUT	52	8841	56	9509	6264	1068684
PWUS	121-140	FCUT	0	0	0	0	2425	218074
PWUS	121-140	LCUT	0	0	0	0	150	7914
PWUS	121-140	SCUT	0	0	0	0	1726	298631
PWUS	141-160	FCUT	0	0	0	0	75	6775
PWUS	141-160	LCUT	0	0	0	0	60	3232
PWUS	141-160	SCUT	57	9802	0	0	407	69996
PWUS	161-180	SCUT	0	0	0	0	151	26090
Subtotal			**236**	**37248**	**124**	**19489**	**41539**	**4559533**
PWUS2	0	THNC	0	0	0	0	248	0
PWUS2	1-20	THNC	0	0	0	0	506	0
PWUS2	21-40	THNC	0	0	0	0	557	6282
PWUS2	41-60	THNC	27	1661	0	0	195	10464
PWUS2	61-80	LCUT	0	0	0	0	100	5151
PWUS2	61-80	THNC	285	27422	19	1842	3419	328166
PWUS2	81-100	LCUT	0	0	0	0	1450	91108
PWUS2	81-100	SCUT	1295	151427	363	43083	4965	581604
PWUS2	101-120	LCUT	0	0	0	0	2200	157852
PWUS2	101-120	SCUT	1793	233122	341	44020	9981	1295197
PWUS2	121-140	LCUT	0	0	0	0	440	31086
PWUS2	121-140	SCUT	1090	134320	54	6719	3110	376309
PWUS2	141-160	SCUT	406	46284	0	0	934	106237
PWUS2	161-180	SCUT	99	11177	0	0	104	11740
PWUS2	201+	SCUT	0	0	0	0	2	223
Subtotal			**4995**	**605412**	**777**	**95663**	**28211**	**3001419**
SF1	0	NA	0	0	0	0	565	0
SF1	1-20	NA	0	0	0	0	579	0
SF1	21-40	NA	0	0	0	0	34	45
SF1	41-60	NA	0	0	0	0	62	2024
SF1	61-80	NA	0	0	18	1368	1324	97283
SF1	81-100	NA	0	0	14	1254	4316	402300
SF1	101-120	NA	74	7326	4	416	3207	325638
SF1	121-140	NA	59	4959	0	0	1007	80443
SF1	141-160	NA	0	0	0	0	411	27299
SF1	161-180	NA	0	0	0	0	101	6436
SF1	181-200	NA	9	522	0	0	96	5594
SF1	201+	NA	0	0	0	0	48	2688
Subtotal			**142**	**12807**	**36**	**3038**	**11750**	**949750**
Total			**33397**	**3198814**	**9400**	**888958**	**317752**	**31103180**

Table 6 - SUMMARY REPORT OF RENEWAL, TENDING AND PROTECTION OPERATIONS

	Area (ha)					
	1994-1999		1999-2004		2004-2009*	
	Planned	Actual	Planned	Actual	Planned	Actual
Renewal						
Regeneration						
Uneven-Aged Management						
Selection Cut - Harvest	32184	14833	30648	10197	22740	2942
Total Uneven-Aged Management	32184	14833	30648	10197	22740	2942
Even-Aged Management						
Natural Regeneration						
Clearcut	4786	1639	2690	84	3074	3
Strip Cut	0	0	0	0	50	
Seed Tree Cut	0	18	0	0	0	
Uniform Shelterwood Seed Cut	12766	5563	3367	1499	4585	140
Subtotal Natural	17552	7220	6057	1583	7709	3085
Artificial Regeneration						
Planting	1910	1028	2562	2033.2	4880	290
Seeding direct	0	1372	54.3	0.3	370	0
with site preparation	0	0	0		0	
Scarification	323	0	0		0	
Subtotal Artificial	2233	2400	2616.3	2033.5	5520	290
Total Even-Aged Management	19785	9620	8673.3	3617	12959	433
Total Regeneration	51969	24453	39321.3	13814	35699	3375
Site Preparation						
Mechanical	1955	1562	3991	1439	4065	84
Chemical	1603	787	2426	1344	2610	733
Prescribed Burn	105	0	223	0	20	0
Total Site Preparation	3663	2349	6640	2783	6695	817
Tending						
Cleaning						
manual	4316	3396	1539	1364	180	0
chemical - ground	481	12	209	1872	2200	89
- aerial	0	0	301	2872	2920	140
mechanical	10	0	0	0	0	0
prescribed burn	0	0	0	0	20	0
Spacing, pre-commercial thinning, improvement cutting						
even-aged	10069	3928	349	1461	455	0
uneven-aged	27445	9525	30648	10570	22740	2942
Cultivation		0				
Total Tending	42321	16861	33046	18140	28495	3031
Protection (Insect Pest Control)						
accelerated harvest		1312				
salvage		1229				
manual protection						
ground insecticide		25				
aerial insecticide		15160				
Total Protection		17726				

Source: FMP-25 AR 5 RPFO

* only 1 year represented for 2004-09 FMP

2006 Independent Forest Audit

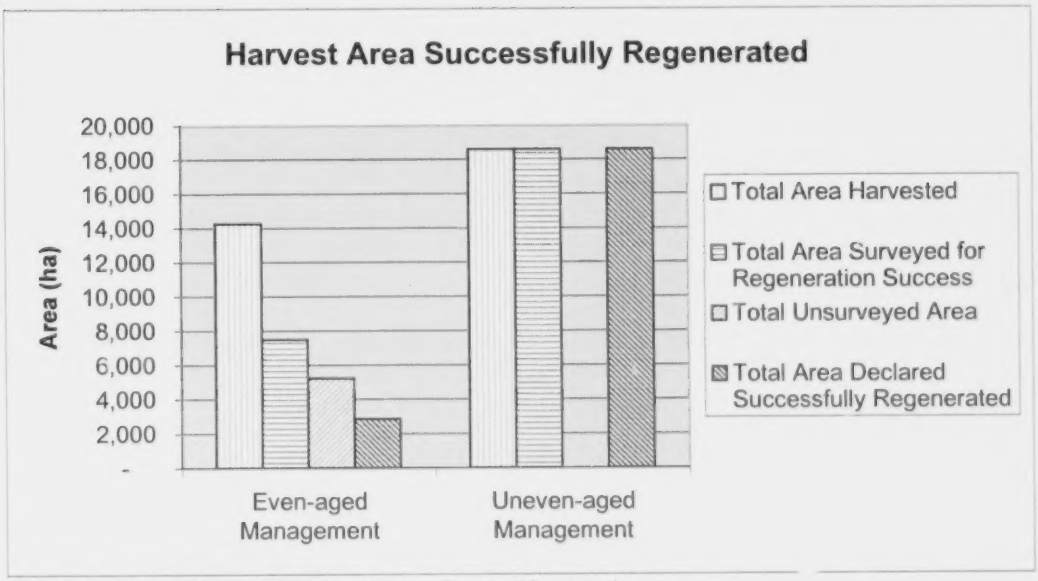
Table 7 - Harvested Area Successfully Regenerated - Summary of All Forest Units

MU: French Severn (360)

1991 to 1996

	AREA IN HECTARES (All Forest Units Combined)	*AREA IN HECTARES (All Forest Units Combined)*
	Even-aged Management	**Uneven-aged Management**
Total Area Harvested	14,275	18,588
Total Area Surveyed for Regeneration Success	7,498	18,588
Total Unsurveyed Area	5,248	-
Total Area Declared Successfully Regenerated	2,852	18,588
Total Area Surveyed Not Successfully	4,646	-
NSR	3,708	
B&S	1,745	-
Not Available for Regen.(eg.roads,landings)	714	929
Other		
Percent of Area Surveyed Declareed	38.0%	100.0%

SU - Surveyed



Note: * FTG refers to area declared Free-to-grow or well-spaced free-growing

** Includes conifer and hardwood uniform shelterwood removal cuts and hardwood selection stands that by nature are free to grow after h

Appendix B: Audit Team Members and Qualifications

The IFAPP identified the following qualifications for Audit Teams:

Lead Auditor:

- must have a minimum of 7 years recent and relevant experience in forest management and forest operations, in similar types of forests, preferably in Ontario;
- must be trained in auditing procedures and have current forest auditing experience; and
- ideally is certified as an environmental auditor.

Audit Team:

- minimum of two people with experience in forest management planning and forest operations;
- a minimum of one wildlife biologist and/or ecologist;
- minimum of one person with experience in assessing: socioeconomic profiles and the social and economic impacts which may result from forest management planning decisions; public consultation processes in the context of forest management; and First Nations involvement in forest management planning;
- for each individual, minimum of 7 years recent and relevant experience in forest management and forest operations in similar forest types, preferably in Ontario;
- ideally, some Audit Team members will be certified as environmental auditors;
- at least one member of the Audit Team must have demonstrated experience and/or training in the requirements of the FMPM including the strategic direction and determination of sustainability component;
- at least one member of the Audit team shall be a Registered Professional Forester; and
- team size is a minimum of three.

The team for this audit, described in Table B - 1 below, included five people in the following positions: Lead Auditor and Harvesting and Modeling Forester, Wildlife and Roads Expert, Silviculturalist, Planning Auditor, and Consultation Auditor.

Table B - 1. The Roles, Responsibilities, and Qualifications of the Audit Team

Name/Company	Role	Responsibilities	Credentials
Dr. Jeremy Williams, RPF ArborVitae Environmental Services Ltd.	Lead Auditor, Harvesting and Modeling Forester	• overall audit coordination; • oversee activities of other team members; • liaise with Company and MNR; • review and inspect forest harvesting records and practices; • review aspects of forest management related to forest economics and social impacts • reviews FMP modeling inputs and activities	B.Sc.F., Ph.D. (Forest Economics); 18 years consulting experience in Ontario related to forest management, planning, wood supply modeling, and forest economics; participated in 14 previous auditing assignments; certified as an auditor by the Quality Management Institute.
Mr. Chris Wedeles ArborVitae Environmental Services Ltd.	Wildlife and Roads Expert	• review and inspect Areas of Concern Documentation and Practices; • review and inspect aspects of forest management related to environmental practices and wildlife management integration; • review and inspect access and water crossings.	B.Sc., M.Sc. (Wildlife Biology); 20 years wildlife and forest ecology and experience in Ontario; completed 25 previous forest audits; certified as an auditor by the Quality Management Institute.
Mr. John Long RPF, Private Consultant	Silviculturist	• review and inspect silvicultural practices and related documentation; • review and inspects selected environmental aspects of forest management	B.Sc.F. Mr. Long has more than twenty-six years experience in forest management, much of it working in the Great Lakes-St. Lawrence Forest.
Mr. Nick Baggs, RPF NGB Forest Management Consulting	Planning Auditor	• review FMP and related documents to ensure compliance with FMPM and TMPM and other regulations	B.Sc.F., R.P.F. 17 years experience in silviculture; considerable experience in Northeastern Ontario; extensive experience in writing forest management plans forest auditing and, ecosystem-based management applications and environmental consulting.
Mr. J. P. Gladu, Aboriginal Strategy Group	Consultation Auditor	• review documentation related to forest management consultation processes • Consult with stakeholders, LCC, and First Nations regarding forest management issues	B. Sc. (Native American Forestry) Mr. Gladu is one of few Aboriginal Foresters in Canada. His experience has focused on Aboriginal issues, related to, economic development, forest based policy, certification, and criteria and indicator development. This is his second IFA.

Appendix C: Independent Forest Audit Guiding Principles

The IFAPP identifies several components of the audit process. The audit protocol constitutes the main framework for the audit. There are eight principles within the audit protocol (Table C - 1). Each principle contains a series of criteria which, if met, will result in the principle being achieved. For each criterion, a number of procedures are used to assess the auditees' compliance and effectiveness.

Table C - 1. The Eight Principles Underlying the Audit Protocol, as noted in the IFAPP.

1. Commitment

Commitment is reflected in vision, mission and policy statements of the Company. Vision and mission statements are intended to provide long-term guidance for the organization. Policy statements reflect how the organization's vision and mission will be achieved. These statements must be reflected in the day-to-day operations of the organization.

2. Public Participation

The process of sustainable forest planning, implementation and monitoring is conducted in an open consultative fashion, with input from all members of the planning team, Local Citizens Committee, native groups and other parties with an interest in the operations of the forest unit.

3. Forest Management Planning

The forest management planning process involves the input of a number of individuals and groups to describe the current condition of the forest, the values and benefits to be obtained from the forest, the desired condition of the forest in the future, and the best methods to achieve that goal. Certain minimum standards and procedures have been established upon which all management units are evaluated.

4. Plan Implementation

Verification of the actual results of operations in the field compared to the planned operations is required to be able to assess achievement of the plan objectives and compliance with laws and regulations. In conjunction with the review of operations, the reporting tables are tested to ensure accurate results are reported.

5. System Support

System support concerns resources and activities needed to support plan implementation so as to achieve the desired objectives. Appropriate control, documentation and reporting procedures must be in place and operational. Planned action should occur at planned times, in planned places and to the planned degree.

6. Monitoring

The activities and the effects of these activities in achieving management objectives must be regularly measured and assessed. In particular, the indicators of achievement must be assessed and their effectiveness reviewed.

7. Achievement of the Management Objectives and Forest Sustainability

Periodic assessments of the management of the forest unit operations and the forest unit must be made in order to determine whether forest sustainability and other management objectives are being achieved. This includes comparing the actual values of the predetermined indicators against the planned values and assessing the reasons for any significant deviations.

8. Contractual Compliance

The licence must comply with the specific requirements of the SFL.

Appendix D: List of Acronyms

ACS	Annual Compliance Schedule (Company)
AOC	Area of Concern
ACOP	Annual Compliance Operating Plan
AFCOP	Annual Forest Operations Compliance Plan
AHA	Available Harvest Area
AR	Annual Report
ATH	Authority to Haul
AWS	Annual Work Schedule
BOL	Bill of Lading
B.Sc.F	Bachelor of Science in Forestry
CFSA	Crown Forest Sustainability Act
Class EA	Class Environmental Assessment for Timber Management on Crown Lands in Ontario
DM	District Manager
FIM	Forest Information Manual
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FOCIS	Forest Operations Compliance Inspection System
FOIP	Forest Operations inspection Plan
FOP	Forest Operations Prescription
FRI	Forest Resource Inventory
FRT	Forest Renewal Trust
FRWI	Forest Roads and Water Crossings Initiative
FTG	Free-to-Grow
FU	Forest unit
GIS	Geographic Information System
ha	Hectares
HDSGB	(Tolerant) Hardwoods (managed by) selection – Georgian Bay
HDSBB	(Tolerant) Hardwoods (managed by) selection – Bracebridge
HDUS	(Tolerant) Hardwoods (managed by) uniform shelterwood
km	Kilometres
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
INT	Intolerant hardwood
LCC	Local Citizens Committee
m^3	cubic meters
MMA	Modified Management Area
MNR	Ontario Ministry of Natural Resources
MOA	Memorandum of Agreement
MOEE	Ministry of the Environment and Energy
MOU	Memorandum of Understanding
MWCC	Mixedwoods (managed by) clearcutting
MWUS	Mixedwoods (managed by) uniform shelterwood
NDPEG	Natural Disturbance Pattern Emulation Guide
NRVIS	Natural Resource Values Information System
OLA	Overlapping Licence Agreement
OLL	Overlapping Licence
OPSEU	Ontario Public Sector Employees Union

OWHAM	Ontario Wildlife Habitat Analysis Model
PT	Planning Team
PWUS	White Pine Uniform Shelterwood
RD	Regional Director
RPF	Registered Professional Forester
RPFO	Report of Past Forest Operations
RSA	Resource Stewardship Agreement
SEMMO	Silvicultural Effectiveness Monitoring Manual for Ontario
SGR	Silvicultural Ground Rules
SFL	Sustainable Forest Licence
SFM	Sustainable Forest Management
SFMM	Strategic Forest Management Model
SIP	Site Preparation
SOP	Standard Operating Procedure
TOR	Terms of Reference

Appendix E: Summary of Input to the Audit Process

General Public/ Other Stakeholders:

Two approaches were used to encourage public input to the IFA (in addition to meeting with the LCC and interviewing is members) : 1) a sample of approximately 400 individuals and organizations on the MNR District mailing list were sent a brief questionnaire asking for input concerning the quality and effectiveness of forest management, and 2) advertisements were placed in regional newspapers soliciting input.

In response to these attempts, we received nine responses. On e of the responses was essentially an inquiry for further information, and a second response expressed concern over proposed and actual harvesting near a cottaging area. The remaining seven respondents generally felt that the forest was being managed well and sustainably, although one respondent felt that the increased wolf population was harming game populations.

Local Citizens Committee:

During the course of the audit, four of the 13 current members of the LCC were interviewed, as well as a previous LCC member. The LCC felt that it was working quite effectively and that it was generally well-supported by MNR, but members were aware that there were areas where further improvement was possible. The greatest challenges expressed by the LCC were keeping on top of the information flow associated with forest management, and maintaining members from sectors that have always been difficult to fully engage, especially First Nations and heritage. The LCC had been proactive in approaching some interest groups and urging MNR to broaden the membership. The idea of developing sub-committees for First Nations, tourism, and trails was supported.

LCC members also described their participation in a wide range of activities, ranging from LCC meetings to open houses, tours and workshops. The LCC was very active on the whole. Some members felt that in some years, when there was a few as three meetings, that additional meetings would be beneficial.

Native Communities:

Seven First Nation communities have traditionally had an interest in the French Severn Forest; response however was limited to two First Nations representatives with the addition of one member cancelling due to a community elder passing away. The level of interest in participating in forest management ranged from essentially nil, in the cases of Moose Deer Point and Wahta First Nations, to lukewarm in the case of the other First Nations. All First Nations were contacted a number of times by fax, registered letter, and e-mails to enquire whether there was any interest in participating in the Forest Management Native Consultation Program as part of the development of the 2004 FMP, however three communities decided to participate in addition to one community not responding. There was discussion regarding native values mapping and Background Reports, and some interested in reviewing and perhaps modifying them. It is important to note that maintaining community flow via long-term forestry portfolio holders is

sometimes challenging and adds to the disruption of participation. Other years may see a spike in interest depending on the direction of the newly elected chief.

The MNR Area Forester and the Westwind General Manager provided comprehensive and thoughtful accounts of the challenges in maintaining dialogue with First Nations who have access to opportunities that are more attractive than forestry, and the subject of those discussions is part of the report.

Overlapping Licensees, Contractors and Commitment Holders:

Overlapping licensees and contractors expressed a strong approval for the efforts and commitment of the Company, as well as MNR. They felt that the Company was doing very well in a difficult industry situation, that the quality of operations was improving due to training and compliance inspections. There were no wood supply commitments on this forest.

SFL Holder:

The SFL holder staff discussed many aspects of forest management, their relationships with stakeholders, and the MNR. The Company emphasized that it could not direct the shareholders but could only make recommendations, for example, of when to harvest a particular allocation. Many of the impressions of the Company reported by the auditors in section 3.1 (Commitment) were derived from discussions with Company staff regarding its general approach to business. Company staff also pointed out that the Company had only been in full operation for about 6 or 7 years at the time of the audit, and there has been a steep learning curve on the part of staff, shareholders, and MNR.

Ministry of Natural Resources:

District MNR staff provided a great deal of input regarding most facets of the audit. MNR staff accompanied the auditors on the field inspections, were available for phone and in-person interviews, and exchanges of e-mail. While some key staff had only been in their position for a relatively short time (e.g. District Manager was acting), MNR staff generally shared the Company's orientation towards forest management, compliance standards, and management of the non-timber aspects of the Forest.

FSC
Mixed Sources
Product group from well-managed
forests and other controlled sources
www.fsc.org Cert no. SW-COC-1985
© 1996 Forest Stewardship Council